

THIS MONTH: 358 Product Support Bulletin Boards May 1993

BOARDWATCH

MAGAZINE

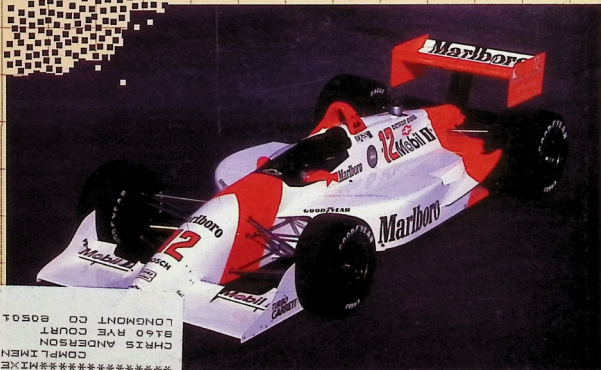
Guide to Online Information Services and Electronic Bulletin Boards

Digital Imaging

Getting the Shot Online
with the
Marlboro Racing News BBS

SFNet - World's First
Coin Operated
Bulletin Board

FEDERAL
REGISTER
ONLINE
Full Text
Available
by Internet



0 71896 482

BOARDWATCH

*****MIXED CTV 80501
COMPLIMENTARY \$194 1
CHRIS ANDERSON
8160 RYE COURT
LONGMONT CO 80501

SYSOPS ONLY \$299*



They're both fast and powerful, but only one will never be obsolete.

INTRODUCING THE UPGRADABLE COURIER MODEM FROM U.S. ROBOTICS. The Courier that you buy today can transmit data at 14,400 bits per second. Tomorrow, it's field upgradable to transmit at the newly proposed 28,800 bps standard and achieve throughput of up to 115,200 bps. Our modular architecture makes for an incredibly simple upgrade. And nothing could be more economical, because U.S. Robotics doesn't



The Courier Modem is easily field upgradable. It's a do-it-yourself upgrade with no downside. Simple, convenient and economical.

build in the cost of upgrades you may never want. A Courier Modem is only \$695. The upgrade is just \$299* if and when you need it. Courier doesn't cost you more, it just offers you more.



Courier was named the #1 high speed modem in PC/Computing's 200 Best PC Products for 1992.

You not only get the comfort of knowing your modem will never be obsolete, you also get the peace of mind

that comes with every U.S.

Robotics product. Superior quality. Outstanding service. And the industry's acknowledgement of perfect performance, including a number 1 rating in PC/Computing's 200 Best PC Products for 1992. *Upgrade available when CCITT Standard is complete.

Make the Courier modem the last modem that you will ever buy.

**V.32bis external with fax.

U.S. ROBOTICS - U.S.A. • 800-DIAL-USR (tel)
U.S. ROBOTICS - CANADA • 800-553-3560 (tel)

INTERNATIONAL SALES

U.S. ROBOTICS - U.K. • 44-0753-811180 (tel) • 44-0753-811191 (fax)
U.S. ROBOTICS - S.A. - FRANCE • 33-20-47-12-10 (tel) • 33-20-91-99-27 (fax)

U.S. Robotics

THE INTELLIGENT CHOICE IN DATA COMMUNICATIONS

DELPHI Lets Your Imagination Run Free.



Five Hours Free!

DELPHI is the online service that gives you the freedom and the resources to expand your horizons. To create, to learn, to discuss, to have fun....to imagine. And now you can try DELPHI with no risk. You get 5 hours of evening and weekend access for free!

You can join special interest groups for nearly every type of computer and download from thousands of files. Read up-to-the-minute news. Conduct research with Grolier's Encyclopedia. Enjoy a chat with other members or compete in exciting multi-player games.

DELPHI is also part of the Internet, the fastest growing online resource in the world. You'll be in direct contact with 4 million people at universities, companies, and other online networks. Send electronic mail. Subscribe to mailing lists. Even

transfer files from other networks using "FTP" or connect directly to other services using "Telnet."

5 hours for Free! After your 5 hour free trial, you can choose from two low-cost membership plans or cancel with no further obligation. With rates as low as \$1 per hour, no other online service offers so much for so little.

FREE TRIAL!

Dial By Modem
1-800-365-4636
Press RETURN
At Password
Enter BW34

DELPHI

Questions? Call 1-800-695-4005

Go For The Pro!



CompuServe Mail

MCI Mail

.QWK Mail

FAX Mail Delivery

File Attachments

**Cut and Paste
Between Messages**

Full Mouse Support!

THE MOST POWERFUL INTEGRATED OFFLINE MAIL MANAGER... **IN THE WORLD !**

Combined with a proven terminal communications package... QmodemPro

Dialing groups allow you to "pull the trigger" and let QmodemPro go get all your mail...NO MATTER WHERE IT IS!

See your local software dealer or call MSI at:

800-999-9619 For product information

Mustang Software Inc.
P.O. Box 2264 Bakersfield CA 93303

FREE TEST DRIVE!
Call Today and Ask For
Special Offer "QB100"



BOARDWATCH

MAGAZINE

EDITOR'S NOTES	8
LETTERS TO THE EDITOR	8
TELEBITS	13
LONG DISTANCE COST BREAKDOWN	13
MACRONIX MAXLITE 144/PC ENTRY IN CUTE POCKET MODEMS LINEUP	13
U.S. ROBOTICS SLASHES SPORTSTER PRICING UP TO 50%	14
BRINKER NAMED PRESIDENT OF GALACTICOMM, INC.	16
GARBAGE DUMP BBS ANNOUNCES LOCAL ACCESS NUMBERS NATIONWIDE	16
MUSTANG SOFTWARE UNVEILS VERSION 3.6 OF WILDCAT! BBS	16
CUSTOMS SERVICE WARRANTS FOR CHILD PORNOGRAPHY	18
EXIDE PERSONAL 2000 UPS	19
RUSTY & EDIE'S BBS BACK ONLINE	20
SOFTWARE NOTES	20
IMPROVING ON WORDPERFECT	20
ANSI Music	23
FAX/OCR SOFTWARE: NOT READY FOR PRIMETIME	24
DIGITAL IMAGING AND MARLBORO RACING NEWS	28
MACINTOSH BBS NEWS	43
NUBUS ISDN CARD	43
EXTERNAL NUBUS EXPANSION FOR MODULAR MACS	44
STORAGE FOR THE AGES	50
TURN ME ON, TURN ME OFF	51
LEGALLY ONLINE - STEVE JACKSON GAMES DECISION STOPS THE INSANITY!	53
DIRECT DIAL	65
SFNET - COIN OPERATED BULLETIN BOARD INVADERS COFFEE HOUSE CULTURE	65
INTERNET NEWS	69
SECOND ANNUAL EFF PIONEER AWARDS	69
BOOK OF SMILES	71
FULL TEXT FEDERAL REGISTER AVAILABLE ONLINE	71
NETWORKING FROM ST. PETERSBURG	75
THIS MONTH'S LIST - PRODUCT/TECHNICAL SUPPORT BULLETIN BOARDS	76
LIST OF BBS LIST KEEPERS	80

Boardwatch Magazine (ISSN:1054-2760) is published monthly at an annual subscription rate of \$36 (\$99 Overseas) by Boardwatch Magazine, 7586 West Jewell Ave., Suite 200, Lakewood, CO 80232. Second Class Postage Paid at Denver, CO. POSTMASTER: Send address changes to: Boardwatch Magazine, 7586 West Jewell Ave., Suite 200, Lakewood, CO 80232
Printed in USA

"I've Had It. We're Getting Hayes OPTIMAs. They're Affordable. They're Dependable. I Can't Go Wrong."



As modem prices continue to drop, it's important that reliability doesn't. With the OPTIMA™ family, you can count on the quality of Hayes at very affordable prices. Data modems. Data plus FAX modems. Board versions. Even portables. With speeds from 2400 to 14,400 bps, OPTIMA is Hayes quality at a surprisingly low price.

SPECIAL FEATURES. OPTIMA's Automatic Feature Negotiation selects the best combination of data speed, error-control, and data compression for throughputs of up to 57,600 bps to save big bucks on phone charges. Hayes' AutoSync eliminates the need for buying special adapter cards to communicate with PCs and mainframes. And to help avoid problems like data interruption and compatibility,

OPTIMA includes the Hayes patented Improved Escape Sequence with Guard Time and Hayes Standard AT Command Set. Just some of the features that helped Hayes win the Computerworld 1992 I/S Brand Preference

Award in 8 categories.

**NEW
LOWER
PRICES**

EXTRA BENEFITS FOR YOU. All this low-priced reliability is packed with our famous Smartcom™ software to help you communicate easily in minutes. And it's all backed by a fast, efficient Hayes Technical Support team. Call 1-800-96-HAYES for your nearest dealer or product literature.

In Canada, call 1-800-665-1259.
Hayes quality, low prices, and peace-of-mind. Think OPTIMA...from Hayes.

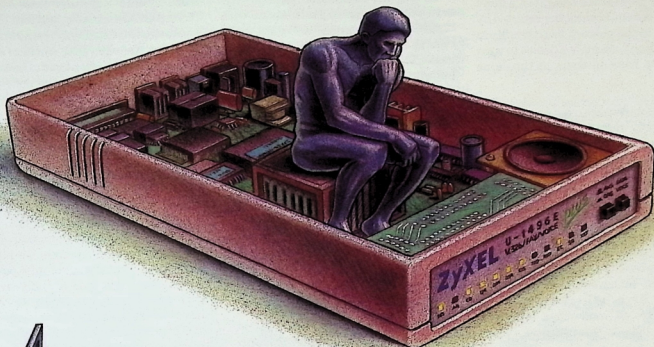
Hayes®
Why settle for anything less?
Hayes products have the computer world talking. More than ever.



Go Online with Hayes BBS; call 800-874-2837 or 404-446-6336.

© 2003 Hayes Microcomputer Products, Inc., P.O. Box 305200, Atlanta, GA 30358. Hayes, the Hayes logo, OPTIMA, Smartcom, and the Hayes '012 Escape Sequence Patent icon are trademarks of Hayes Microcomputer Products, Inc.

WHY OUR INTELLIGENT MODEMS ARE A WISE INVESTMENT.



With the ZyXEL U-Series modems, you're sure to save.

Time. Effort. Money.

The savings begin with the U-Series' ultra-high speed—16.8Kbps data, 14.4Kbps fax (send and receive). And our new PLUS Series runs at 19.2Kbps.

But what keeps you saving are the U-Series' intelligent features—features that save you effort and ensure reliable communications.

Like *Fast Retrain* with *Auto Fall-Forward/Fall-Back*. And multi-level security features—*Call-Back Security* and *Password Protection*. With *Caller ID*, you can even answer calls selectively.

Want to save by having one phone line do the work of three? Get the U-Series. It adds *Digitized*

Voice Capability with Speech Compression to its fax and data capability. And, *Distinctive Ring* and *Auto Data/Fax/Voice Detection* for intelligent access to all three.

And now there's a *Cellular Option* for the new PLUS Series.

Everyone can save with the U-Series modems. Because they're smart enough to work in all environments including DOS*, Windows*, OS/2*, Macintosh*, NeXT*, UNIX*, and Amiga*. The U-Series modems support V.32bis/V.32, as well as industry-standard data compression and error correction protocols.

In case you believe all this intelligence is expensive... relax.

The U-Series are the

lowest-priced, high-performance modems around. And they come with free ZFAX software and a 5-year warranty.

Which means now is the perfect time for smart people to save—by getting the ZyXEL U-Series modems.

To start your wise investment, just call today for the name of your nearest ZyXEL dealer.

(800) 255-4101



SysOp Special
\$299
for U-1496E.

Special SysOp prices also available for other models.

4920 E. La Palma Avenue, Anaheim, CA 92807. (714) 693-0808 BBS: (714) 693-0762 FAX: (714) 693-8811

*Available April 1993. All trademarks are the property of their respective owners.

ZyXEL
The Intelligent Modem

EDITOR'S NOTES

I had to notice this month, that our little magazine seems to have a lot of writers all of a sudden. This is a bit like watching a gang of young adolescent males circle your 13 year old daughter. I don't suppose you would want her rejected by her peers to the point of heartbreak, on the other hand, there is a desire to turn the garden hose on them at the same time.

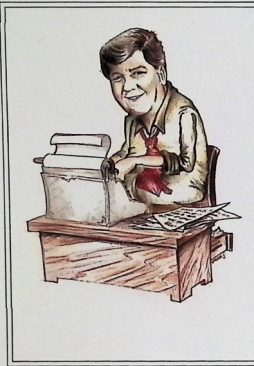
I started Boardwatch over six years ago and the only help I can recall was a tremendous number of concerned people offering the very friendly advice that I shouldn't do it that way, shouldn't do it on that subject, or shouldn't do it at all. The BBS community in those days was viewed very much as you would a group of people who got together every Tuesday night to exchange toothbrushes. "They do what? To whom? With their computers? Why would they want to do that?" So it's a little difficult at this point to "let go" and allow others to fondle my baby in this intimate a fashion.

But things change. As it turns out, the online community will most likely be the hottest development area in PCland, with most other PC applications beginning to look like office equipment, and the White House itself singing the praises of a national data highway, the BBS fringe is about to become the national obsession. The real progress in computers over the next five years will come in operating systems, internetworking, and BBS technology. We're kind of set on making a passing stab at covering the interesting developments in the latter two subjects.

And to face the world as it really is, one guy can't know all that is happening online. Actually, one guy never could, but with a bit of paste, scotch tape, and a lot of dialing, he could present the illusion of authoritative coverage. No longer. Development of tools, networks, and simply the number of pools of intense activity online have grown to the point where if I hadn't done so before, I have now attained a satisfactory level of incompetence. I am panicked by all the

things going on that I should have had covered in the last issue, still don't fully understand, and don't have time or room enough for next month anyway.

We're now printing nearly 60,000 Boardwatch's per month. And even forsaking the optimistic "pass-on" figures most magazines talk about with regards to circulation, we've got to be hitting 150,000 sets of hands with each issue. The text is distributed to over 200 bulletin boards now that license it for online display, and we don't have a clue as to how many are actually reading it



there. Probably somewhere between 200 and 200,000.

So we've been opening up the doors a bit to contributions by other writers. Some early experiments were painful, in that I've been just terribly persnickety about what goes into Boardwatch. But an objective view would indicate it has been worthwhile. So with this issue, we expand it a bit. And despite the inflated value I place on my own text, I have to admit that some of these guys do good stuff. Bill Gram-Reefer has been doing an excellent job on covering the Mac stuff for our Macintosh readers, and Lance Rose has developed quite a following actually with his Legally Online columns. Bill even sounds a bit like

Boardwatch, and Lance of course, sounds like a lawyer - but he understands the legal complexities of some of these developments and it is important that our readers do as well.

In this issue, we include contributions from Thom Foulks on Fax/OCR, Alan Bryant on ANSI music, and Jim Thompson makes an extremely credible stab at covering the emerging world of digital imaging from the front end of how major news organizations get the images into digital format in the first place. And reading through it, it's my estimation that these article submissions are good stuff.

I'm hardly out of the picture, and any not otherwise attributed articles are generally mine. But broadly, our growth reflects the growth of our subject. As we move through the next phase of growth for Boardwatch Magazine, we plan on expanding from the current 96 pages to about 140 by the end of the year (and probably topping out there, I seem to have trouble finding time to read these 400 page magazines). And as the online world grows and becomes more varied, and as Boardwatch grows to try to cover it, it is perhaps appropriate to include more voices, and more different points of view, in our editorial matter. And so we will. In any event, I'll be there with the garden hose just in case.

Jack Rickard
Editor Rotundus

LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, Boardwatch Magazine 5970 South Vivian Street, Littleton, CO 80127 or by e-mail to letters@boardwatch.com

Dear Jack:

Due to the encouragement from you and fellow BBS folks at the first ONE BBSCON, Randy Sues, co-inventor of CBBS/Chicago, the worlds first BBS, and I got the temporarily-down CBBS/

Chicago back on line. It was down from about 06/07/92 to 09/12/92. We had gotten careless on backups, and Randy Seuss physically opened the stuck hard disk, and manually spun it while applying power - it WORKED, and he was able to back up! Randy recently put a couple old Bernoulli boxes on CBBS so I can (remotely - it is at Randy's house - "in Chicago" rather than in the 'burbs) back it up periodically.

Thanks for a great magazine and a great convention, and the nice award last year! Keep up the good work.

Ward Christensen
Dolton, IL
ward@chinet.chi.il.us (chinet is Randy's
unix system)
CIS: 76703.302
BIX: wardc
AOL: WardXmodem

Ward:

It is remarkable to me personally that CBBS/Chicago, the first BBS in operation, still operates. It is an online monument both to how much things change, and how much they stay the same. If we had any small role in inspiring its resuscitation, I'm most pleased. And poignantly, from the first BBS to the last, we once again find that backups still cause bonus points to be awarded.

For our new readers, Ward Christensen wrote the very first BBS software package, as well as the XMODEM file transfer protocol that in many ways got us started in transmitting files conveniently. CBBS/Chicago is backup and running at (312)545-8086. And Mr. Christensen will be hosting a special session at the Online Networking Exposition and BBS Convention (ONE BBSCON) scheduled for August 25-29, 1993 at the Broadmoor Hotel in Colorado Springs.

Jack Rickard

Hi, Jack!

I finally got your magazine, after seeing it once in its electronic format in a BBS... I want to congratulate you for it, it's ALL a sysop or a BBS-enthusiast needs. I want to know how much would

it cost to subscribe to it, as I live in Mexico, both in the electronic and the "physical" formats.

I also wanted to comment some things about it: I see you cover a lot of BBS software, like WildCat, Omega, SuperBBS, Galacticom and the sort. But, at least here in Mexico and in some places in the states where I've called to, there are lots of other BBSes, based on WWIV or VBBS. Here in Mexico, we have 11 BBSes (REALLY a few for a 20-million people city), which are: One in Amiga, free, I don't know with which software; one in Atari ST, running FoReM, also free; one in PC running TBBS, multiline, and charging US\$20 a month, one on PC running SuperBBS, free; one on PC, free running WWIV and three running VBBS, also free. You see, it may seem somewhat strange for a lots-of-BBSes-community like the USA, but it's enough for the few people who use their modems.

What I wanted to know, being VBBS the fastest-growing BBS software and net in the US, why doesn't it have more coverage? It's a VERY good program, VERY easy and friendly for a Sysop, and also for the user, very powerful... I mean, it's a very good BBS, which is not used as much as I think it should...

OK, then, thanks a lot for your reply!

Gunnar Wolf
gwolf@spin.com

Gunnar:

We try, but there is a lot going on in BBSland. But I agree, the WWIV omission has to be dealt with soon. We had contacted Michael Bell a year or so ago trying to get an address for a list of BBS software vendors we occasionally publish. The response was rather disinterested and we assumed the software was nearly abandoned. I was stunned to learn there are now over 4000 bulletin boards in WWIVnet. We'll try to schedule it for a look soon.

We've recently revised our subscription prices for Canada and Mexico to the usual \$36 for the printed magazine. It still costs us a little more to mail to those areas, but not as much as it had and

we've had very enthusiastic readership - particularly in Canada.

Jack Rickard

Greetings!

Just read your "Editor's Notes" in the Feb/93 issue of Boardwatch.

The closing paragraph "What happens when mass media changes [etc]" strikes very close to home.

In my current position, employed by/consulting for an adult education program in Detroit to establish an Electronic Communication system for the students/public at large, I was *shocked and dismayed* to hear the director open a dedication ceremony with words to the effect:

"The control of information is power"

Somehow, I thought such thinking was put in its place some 50 yrs ago. We, as carriers of information, must remain ever vigilant to avoid and actively prevent meddling with the thoughts of others. True, there are commercial broadcasts and media wherein the message has to be the "company line", but any interference with an interpersonal communication, insofar as "controlling information", must be rejected hands down!

Just a thought on St. Patti's day... over morning bitters, Green Eggs and Spam while testing a newly connected InterNet Email link.

Gary Groeller
gary.groeller@hal9k.ann-arbor.mi.us

Gary:

Well I agree with both of you. The control of information is certainly power. And who has that power, and how it is used, is one of the primary questions the online community faces.

This is complicated by the fact that some content control is almost required - at



some point in the process. Clear and usable channels are impossible in a truly "free speech" forum. At the same time, the responsibility for clear and usable channels should be moved to the farthest possible point down the food chain - ideally those individuals communicating, but more practically, at the level of individual forum moderators. Governments and those operating large networks are virtually disqualified as controlling agents, and should not under any conditions be allowed content review of any sort. Yes, this includes Prodigy. They should not be allowed, as an organizational entity, content control of their own forums.

Jack Richard

Jack,

Thanks for the sample copy of your Magazine. I've read everything and found it highly informative.

It was noteworthy that you provided the CompuServe e-mail address for the White House, and then two days later there's a wire service story about it in the local paper. BUT, the E-mail address was NOT given.

Hmmm....Maybe Rush Limbaugh was right, symbolism over substance. They've taken on an E-mail account, but won't let out the address?? Too late, the good folks at BOARDWATCH have let the cat out of the bag. Let the EMAIL flow.

Donald McLaughlin
ahn@mentor.cc.purdue.edu

Donald:

It will be very interesting indeed to see how large governmental entities deal with the fire hose of e-mail they face with each published e-mail address. It couldn't happen to a nicer, or more deserving bunch of guys (!guyettes).

Jack Richard

Jack,

Just received my April issue of

Boardwatch, and something in your reply to Brad Clements' letter caught my eye ... I quote:

"File transfers can theoretically be handled quite well over telnet using Chuck Foresberg's ZMODEM protocol ... I'll admit I don't quite understand why there are problems with this."

I think I may be able to help shed some light on this. I have established a test link with our Internet service provider whereby callers with Internet access can telnet into our system, sort of ... the caller actually telnets to our service provider, which then dials out to us and makes the connection. It's not available for public use yet, and won't be until I can arrange a dedicated connection to our service provider (the dialout system isn't really optimal, and is also not without its costs since we have to reimburse our service provider for the telco message units). All in all, though, it doesn't work half bad ... except that so far no one has been able to get ZMODEM to work, at least not at high speed (14.4K). "Interactive" protocols like XMODEM and YMODEM seem to work OK, though the throughput is rather anemic, on the order of 400-500 characters per second at 14.4Kbps.

In all likelihood the problem is probably packet assembly delays. TCP/IP tends to wait a while (on the order of a tenth of a second) before sending out a packet with only 1 character in it, or it may send out a packet after a few characters are ready ... this appears to introduce unacceptable delays that mess up flow control and also prevents the sender from getting timely notice of errors and retransmission requests. Interactive protocols like XMODEM don't have this problem since flow control and error notification work by the definition of the protocol; a packet gets sent, and another doesn't get sent until the first one is acknowledged. This also accounts for the XMODEM/YMODEM sluggishness; the delay would be all spent in the ACK cycle between the packets while TCP/IP decides to go ahead and send the packet with the single ACK character in it.

A good part of the problem is that our service provider has only a 56K link to

NEARnet; if they had a T1 line (which they may before too much longer) the problem would be less and might even go away altogether, at least while dealing with pathways that run at least at T1 speeds all the way.

Don't really know if the above is entirely accurate in all respects, but I think it's pretty close.

Eric Poole
The New England Technology Information Service
epoole@leotech.mv.com

Eric:

ZMODEM was designed specifically for packet networks. We've had poor luck with XMODEM/YMODEM as well and only Kermit seems to work reliably, if very poorly, over telnet links.

What makes ZMODEM interesting is that it WAS designed specifically for packet links. More interesting, telnets to sites using MMB Development's TEAMate BBS software result in flawless ZMODEM transfers. Still looking for the answer on this one I'm afraid.

Jack Richard

Jack,

First, The April issue of Boardwatch is exceptional, can it get much better? Consider this message a FYI for you or anyone who is suitably interested in learning about sound and the PC, to be specific. On America Online, there is a message thread titled 'Sound Board Advice' in the 'Music and Sound Hardware' forum under 'Computing & Software', which was created by Rich Heimlich, the author of 'Sound Blaster - The Official Handbook'. Before Rich, most of the controversy occurred in the Advanced Gravis Ultrasound thread, which seems to have attracted the lion's share of devotees (mostly Soundblaster critics). Since Rich started posting in 'Sound Board Advice', there has been a wild donnybrook being waged with more information and knowledge on sound technology that a single human can stand. Yet, I am totally addicted, and my AOL bill has exceeded my monthly

heating bill. Unfortunately, AOL does not provide the feature, like CompuServe, to download a forum for off-line perusal. So, Steve Case, president of AOL, must be profiting from all the passion and fury dispensed by on-line voyeurs. Guilty!

Thanks, Alex Safer (aka FIBER)
FIBER@AOL.COM

Alex:

Sound? We haven't gotten up to speed on digital images yet and already sound is coming up.

A small, but notable correction. CompuServe didn't PROVIDE a way to download forums for offline perusal. Some USERS developed software a number of years ago to do so. If you are waiting for AOL to do so, while it would be laudable and probably a good long term business decision to do so, it is not in their short-sighted economic interest to do so. Why don't some of you AOL guys build a TAPCIS or OZCIS type package to address forums?

Freedom, privacy, economic efficiency. These are all laudable goals, but they are ALWAYS achieved by those who actively devise mechanisms to secure them for themselves. Complaining and appealing to the powers that be almost never work until they can see it is not technically feasible to resist. Self reliance works. If you want lower AOL bills, you can have them. But Steve Case isn't going to hand them to you. And I am not certain even that he should.

Jack Rickard

God Bless You, Jack, you have done it again! In measured tones, you have condemned what is patently unjust and tyrannical, where there is need for such a witness and rallying cry! As a lawyer and fellow American, I applaud your stand on this abuse of governmental power. As a citizen, I will add my voice to yours and, hopefully, others. It would be strange, indeed, if police state tactics such as you recount in the April issue could flourish here, now, after all we have been through.

Robert W. Muir
76665.111@COMPUSERVE.COM

Robert:

If we DON'T raise our voices, it can flourish here as easily as anywhere else, Mr. Muir. We were warned early in our history that vigilance will always be the price. Today, there are too many hoping someone, somewhere will be vigilant, or taking false comfort in the uncertain knowledge that it "couldn't happen here." News flash. We get the government we deserve. Thanks for writing.

Jack Rickard

Dear Sir:

I think you and your staff are doing a good job with Boardwatch. I also see that you like to feature a new area every month. Yes, I am a sysop! But we would like the world to know that we have BBS's in South Korea.

I am in the U.S. Army and am stationed in South Korea. I am the sysop of the PublishingBBS, running RBBS-PC Ver 17.4 with mods. I know of about 24 BBS's running in South Korea with sysops who are in the military. How about doing a story on us, sysops in South Korea?

Thanks for taking the time to read this and keep up the good work with Boardwatch.

Michael Robinson.
The PublishingBBS
011-82-351-869-3511

Dear Michael:

So many bulletin boards - so little time. We'll try.

Jack Rickard

Dear Jack,

Bravo for your editorial and story of NAPLPS in your December 1992 issue. NAPLPS is such a tongue twister that it is no wonder there is so much controversy about it.

So let me help you demystify this technology. My background in NAPLPS stretches back over 10 years when I was the marketing manager for the first manufacturer of NAPLPS terminals in the world. It was my job to build a dealer network for a \$1,500 box that had no commercial services which it could access - how's that for a challenge!

I then moved on to a software company and accomplished the following:

- developed the first multi-user NAPLPS host servers system (equivalent to today's BBS system) based upon an Altos system that ran under MPM.

- travelled this system around the world for Canadian exporters exhibiting at international trade fairs.

- enhanced the system to act as an interactive retail point-of-purchase terminal which sold software in "The World's Biggest Bookstore", the flagship store of Coles Book Stores, Canada's biggest book chain.

The innovation of using a microcomputer to host a NAPLPS service was unheard of in 1983 when the concept was that you could only do justice with a mainframe. We proved that concept false.

The best thing we did, though, was to develop NAPLPS terminal software for the Commodore 64 - a \$200 toy with only 64K that was able to do splendid graphics for its time. We were the first to suggest that a dedicated hardware terminal was not the way to go for NAPLPS and that the spreading enigma known as the personal computer was a more reasonable approach.

I can't begin to tell you the controversy that arose, especially when we announced our plan to license system operators to give the software away for FREE! Can you imagine that one major system operator who was losing \$9 million a year did NOT want to be included in our FREE program and threatened me with a lawyer's letter? Amazing but true.

We even had a major telephone company commit an act of industrial espionage.

nage to discover the secrets of our software.

So now, your publication will be the first to know that my secret weapon was a single individual, (a U.S. citizen no less) who was committed and dedicated to exploring advanced uses for personal computers. Starting this project in 1983 took a lot of courage. This single individual took a hardware device the "experts" all laughed at and made it perform full NAPLPS functionality.

While preparing the software for Viewtron, the Florida system operated by Knight Ridder Newspapers, we tested and retested the software against the authorized NAPLPS test frames and you can be sure that we had to pass the test in order for Viewtron to finally agree to distribute our product.

The NAPLPS chauvinist mentality which you refer to in both your editorial and in your story when describing the Microstar approach has been at the top of the obstacles to this interesting technology making any kind of headway in the market. Peter at Microstar thinks that everybody should pay him what IBM did for his software and has not subscribed to the theory that the widest possible distribution is what will kickstart the technology. It is also obvious that these type of software developers are out-of-touch with the reality of the business, and demonstrate incredibly poor business acumen by failing to understand how such an action would develop ongoing repeat business down the road.

Its amazing how short the road can be. Bell Canada launched a consumer NAPLPS service in Canada a couple of years ago. They spent millions on developing an access device - you guessed it - a dedicated terminal which the consumer would rent for \$8 a month. Sure they also bought a cheap software package which they initially distributed for free. The Microstar personality package sold for either \$149 or \$99 (my memory fails me), and didn't have half the stuff that a qualified terminal program should have.

Needless to say, it didn't take a full 2 years before Bell virtually abandoned

its service because the consumer didn't buy their terminal idea and then left the 300+ service providers they had recruited to hang out to dry while consumer access declined to bankrupt levels.

At any rate, all the rhetoric regarding NAPLPS functionality, compliance etc. is all there to protect the paranoid nepotism of those who have stayed in this business for so long. It is a narrow minded, short sighted attitude that has been the primary reason for NAPLPS failing to make its mark.

So if there are software developers in the BBS community who want to commit themselves to NAPLPS, then I will provide them with my NAPLPS expert (with whom I continue to maintain a decade long association) so that they can implement NAPLPS within their software.

Furthermore, the deal can be as affordable as adding another staff member to their team. NAPLPS wasn't meant to cost big bucks - it was meant to generate big bucks.

Once the news of this offer gets out you can be sure that I will once again be labelled a heretic and excommunicated by the remaining hardcore NAPLPS devotees. But I am big enough to withstand the insults of a half dozen ragtag survivors - the reward of hundreds of thousands of online NAPLPS users will be easy to bear.

Jack, I have watched your magazine grow over the past couple of years and have admired your dedication to the truth and your unrestricted approach to commentary. I hope that this letter will find its way into the pages of your magazine because the BBS community as a whole needs to know more about NAPLPS. I have tried to add perspective to your reporting. NAPLPS isn't a scary or expensive technological approach to graphics that the OLD GUARD would have everyone think. Now, if only NAPLPS could be renamed something that one could pronounce without thinking they are uttering something smutty.

Boardwatch Magazine

ISSN: 1054-2760
Volume VII, Issue 5
May, 1993
Copyright 1993 Jack Rickard
All Rights Reserved

Editor/Publisher

Jack Rickard

Contributing Writers

Bill Gram-Reefer
Lance Rose
Jim Thompson
Alan Bryant
Thom Fouls

Advertising Sales

Charlie Moore

Graphics Design

Charlie Moore
Scott Dawald

Subscriptions/Circulation

Rob King

Technical Operations

Gary Funk

Newsstand Circulation

Martin L. Shalkowitz

Editorial Offices

5970 South Vivian Street
Littleton, CO 80127
(303) 973-6038 Editorial
(303) 973-3731 Fax
(303) 973-4222 BBS
(800) 933-6038 Subscriptions

Electronic Mail

Internet:
jack.rickard@boardwatch.com
FidoNet: 1:104/555

Sincerely yours,

Zal Press
Addison Information Systems
456 Glengarry Ave.
Toronto, Ontario, Canada M5M 1G1
(416) 477-7141

Jack:

I once did, personally, "blow up" a monitor by purely software means.

It went like this. 1981/1982, working for Phoenix Software, Neil gives me an IBM PC (not XT) to check out. In configuring it (or fooling around, I forget which) I set the DIP switch for the monitor type wrong; mono vs. color. The DIP switch is read by the ROM BIOS software, and determines how the 6845 controller chip is initialized. When I turned the machine on, it made a bad noise and the monitor went out. I was petrified; it was not my hardware and it was ugly alien machinery. Upon disassembly, I found a soldered-in fuse had blown; the incorrect video sync caused excess flyback current, presumably, and took the incorrectly-sized fuse with it.

This really happened. They certainly changed the design somehow, because this never happens any more. It was a very early PC; I don't remember the exact date, but I can date it to late 81 I think by where I was living at the time.

Tom Jennings
tomj@fido.wps.com
World Power Systems
San Francisco CA

MEA CULPA

In our March issue article on PKWARE, Inc., developers of the PKZIP data compression utility, we included the wrong fax number for the company. The correct contact information for PKWARE, Inc. is 9025 North Deerwood Drive, Brown Deer, WI 53225; (414)354-8699 voice; (414)354-8559 fax; (414)354-8670 BBS. Note that PKWARE has since released version 2.04g of PKZIP which addresses many of the minor problems noted in our article.

TELEBITS

LONG DISTANCE COST BREAKDOWN

The cost of long distance telephone connections has dropped by some 44% since the breakup of the Bell System in 1984. During the same period, local telephone service rates have risen. One of the reasons cited by local telephone companies is that they often must provide flat rate service with none of the opportunities for incremental charge business that the long distance carriers have. We recently talked to several long distance carriers and found that this entire line of reasoning has a bit of a problem.

As best we can tell, the breakdown of a basic 12 cent per minute long distance telephone call is as follows:

Access charge paid to LOCAL telephone company at point of call origin 4 . 5 cents per minute.

Access charge paid to LOCAL telephone company at point of call termination: 4.5 cents per minute.

Cost of switching and hauling call across country by Long Distance Carrier: 1 cent per minute.

Administrative, accounting, and profit for Long Distance Carrier: 2 cents per minute.

Why are we paying local telephone companies these access fees? Without them, we would probably see long distance companies offering flat rate long distance service - or at least LD connections in the \$1.20 per hour range to anywhere within the United States. The access fees were mandated by the Justice Department as part of the Consent Decree that broke up the Bell System. At the time, the 4.5 cents seemed pretty modest. But with advances in technology, the cost of transporting a call across the country has fallen so dramatically, that nearly 75% of the cost of a long distance telephone call within the United States currently goes to local telephone companies. The breakup of the Bell System offers a laboratory demonstration

of competition on the one hand in the long distance carrier market and monopoly on the other in local telephone companies. We pay the price.

MACRONIX MAXLITE 144/PC ENTRY IN CUTE POCKET MODEMS LINEUP

Macronix, Inc. may not be a very familiar name in the BBS community. But after playing with their MaxLite 144/PC pocket modem, we think perhaps they should be. For those on the road, this little pocket router makes the connection in pretty good style.

The MaxLite 144/PC offers both 14,400 bps V.32bis data connections, and send and receive 14,400 bps V.17 fax transmissions, in a tiny unit that more closely resembles a mouse than anything else. The modem features V.42/V.42bis error correction/compression as well as MNP 5.

The modem is very easy to use and works well at all speeds we tested. The package includes WinFax Lite, by Delrina Software, allowing you to fax from Windows. But it also includes a program titled MaxTalk that is a terminate and stay resident (TSR) program that allows you to pop up the fax function within any DOS program, and send the application file to a fax if it is in a format for delivery to any HP laser printer (PCL format support. Graphics and text arrive intact. The software also handles ASCII text, .PCX, or .TIF files with ease.

The unit includes a tiny 10 watt AC power transformer, and will run off of 9V alkaline batteries as well. Following a convention now common with pocket modems, a cable is provided to link the 9-pin micro DIN connector to a 9-pin AT style serial port.

The MaxLite is available in the MaxLite 144/PC model for PCs, and with slightly different cabling for Macintosh users in the MaxLite 144/M. The suggested list price for this unit is \$449, but they are commonly available for a street price of around \$349. Since pocket modems normally go at a bit of a premium for the



Macronix MAXLITE 144

size reduction, this is actually pretty attractive for 14.4 v.32bis and send/receive 14.4 fax. Enough software comes with it to keep you puzzling through it for days, and it works quite well.

Our only complaint is that we've grown accustomed to pondering in amazement the various cunning leather pouch designs pocket modem manufacturers are devising since the introduction of the Telebit Qblazer. The MaxLite didn't include one at all. But the light weight and small size (the modem unit itself weighs 4.9 ounces without battery - and that's just 3.5 times the weight of a 9v battery itself) in a flat, rounded corner package (2 7/8 X 4 1/2 X 1") makes this very easy to carry in a laptop case. It does include a very clear speaker, and two LEDs to indicate on hook/off hook status, and data activity. Documentation is quite clear. For laptop/road use, this one looks like a winner. MACRONIX, Inc., 1348 Ridder Park Drive, San Jose, CA 95131; (408)453-8088 voice; (408)453-8488 fax.

U.S. ROBOTICS SLASHES SPORTSTER PRICING UP TO 50%

As of March 15, 1993, U.S. Robotics announced dramatically reduced pricing on its Sportster fax and data modems. The company reduced prices on the entire product line with prices on high-speed Sportster models dropped 42 to 52 percent.

"U.S. Robotics is the only company that has lowered pricing to this extent - in some cases, we've cut prices in half," said Marshall Toplansky, U.S. Robotics

vice president of marketing. "Continuing our history of strong price leadership, we're boosting the overall market and stimulating growth by making high speed modem technology accessible to a greater number of users. This price reduction enables our home office, small business, and entry-level customers to move up to high speed fax and data communications, at prices comparable to what 2400 bps modems sold for just last year."

The product has also been redesigned with a much smaller, more compact case. Additionally, U.S. Robotics has upgraded the fax capability to CCITT V.17, increasing performance from 9600 bps to a maximum of 14,400 bps for fax transmissions. They also include WinFax LITE, a special OEM Windows fax package from Delrina Software, makers of WinFax Pro. The new products are available now.

U.S. Robotics also has a 50% discount program on the COURIER line of modems for qualified BBS operators. The Sportster models are not included in the BBS discount program. They have also recently revised the program to allow payment by credit card. They've also established a European point of contact in France for sysops in Europe and an International 220v version of their power supply. European BBS operators can contact 33 20-471210 voice; 33 20-919927 fax; 33 20-059945 BBS.

New U.S. Robotics Sportster Prices

Model	New Price	Previous Price	Discount
Sportster 14,400 Fax	\$299	\$549	46%
Sportster 14,400 Fax/PC	\$259	\$499	48%
Sportster 14,400 Mac&Fax	\$329	\$599	45%
Sportster 14,400	\$259	\$519	50%
Sportster 14,400/PC	\$229	\$475	52%
Sportster 9600 Fax	\$249	\$439	43%
Sportster 9600 Fax/PC	\$239	\$409	42%
Sportster 9600	\$229	\$399	43%
Sportster 9600/PC	\$219	\$379	42%
Sportster 2400 Fax	\$169	\$249	32%
Sportster 2400 Fax/PC	\$159	\$229	31%
Sportster 2400 Mac&Fax	\$199	\$329	40%
Sportster 2400 V.42bis	\$149	\$229	35%
Sportster 2400 V.42bis/PC	\$139	\$199	30%
Sportster 2400	\$129	\$199	35%
Sportster 2400/PC	\$119	\$179	34%

Multiple User Friendly.

TEAMate® BBS software for UNIX®

Since 1985 we've been building easy-to-use multiuser software specifically designed for commercial application. In fact, MMB TEAMate® is the only bulletin board software with the features and flexibility that can accommodate the widely differing communication requirements of your

employees, customers and suppliers. Versions currently available for Intel, SUN, IBM RS/6000, HP-UX, DEC Ultrix, AT&T 3B2, Sequent and Data General. Call for complete information, and access to our demo system via INTERNET or dial-up. For the best BBS software, hands-down.

CALL (800) 832-6022 or (310) 318-1322
FAX (310) 318-2162
MMB DEVELOPMENT CORPORATION
904 Manhattan Avenue, Manhattan Beach, CA 90266

UNIX is a registered trademark of UNIX System Laboratories.

The company has also recently converted their product support bulletin board to PCBoard software at (708)982-5092. U.S. Robotics, (NASDAQ:USRX), 8100 North McCormick Blvd., Skokie, IL 60076; (800)-DIALUSR.

BRINKER NAMED PRESIDENT OF GALACTICOMM, INC.

Scott J. Brinker was named President and Chief Executive Office of Galacticcomm, Inc., Florida-based developer of The Major BBS, a multi-user bulletin board system supporting up to 256 simultaneous users on a single machine.

Brinker has been with the company as Vice President since December 1990, when his own company, Galactic Innovations, Inc., merged with Galacticcomm. During the past two years, Brinker has at various times led the marketing, engineering, and sales departments of the company. More recently, he has served as general manager, coordinating efforts of the entire business.

"I intend to lead the company with an aggressive development plan and a focus on the success of our customers," says Brinker. "Immediate attention will be paid to expanding our customer service, international business, and third-party developer relations. I'm very proud of the team I'm working with and thrilled about the opportunities before us."

Tim Stryker, founder of Galacticcomm, has resigned as President and CEO, although he does remain as Chairman of the Board. Says Stryker, "Scott has been leading the strategic vision of Galacticcomm for quite a while now. I have total confidence in his success as CEO and for the continued growth of the company. This is the beginning of a fantastic new era."

Recently, Galacticcomm announced an alliance with two graphics and terminal program companies, and continues to remain a leader in the commercial BBS software industry. A new release of The Major BBS is expected this spring. Galacticcomm, Inc., 4101 SW 47th Ave.,

Suite 101, Fort Lauderdale, FL 33314; (305)583-5990 voice; (305)583-7846 fax; (305)583-7808 BBS.

GARBAGE DUMP BBS ANNOUNCES LOCAL ACCESS NUMBERS NATIONWIDE

The Garbage Dump BBS announced February 22nd, their expansion to 63 lines, with local access in over 500 U.S. cities. The Garbage Dump specializes in real-time adult chat, uncensored message forums, ASP downloadable files, online dating registry, casino-style games, and multiplayer adventure games.

The local access numbers will allow users to call The Garbage Dump with a local telephone call to an X.25 network service provider. Previously, users outside the local calling areas of Albuquerque, New Mexico, and Denver, Colorado, had to pay long distance fees in order to connect to the BBS. The new access numbers will allow access at rates as low as \$2 hourly for evening and weekend use.

"We felt the addition of local access at an attractive rate during our heaviest usage periods in the evenings and weekends would increase our user base, as well as save our long distance callers a considerable amount of money," said Dean Kerl, system operator of The Garbage Dump. "We were aware that many of our users were limiting the amount of time they spent on The Garbage Dump because of the cost of long distance. The response has been overwhelming and we had to increase our incoming capacity from 47 simultaneous users to the current 63 since the local numbers came online February 1."

The Garbage Dump BBS first went online on December 1, 1990 with 4 lines. The service currently receives 1700+ calls daily from a user base of over 5000 callers. Data Safe Publications, Inc., PO Box 16032, Albuquerque, NM 87191; (505)294-4980 voice; (505)294-8225 fax; (505)294-5675 BBS.

MUSTANG SOFTWARE UNVEILS VERSION 3.6 OF WILDCAT! BBS

Mustang Software announced on March 15 that they have begun shipping Version 3.6 of their popular BBS package - Wildcat! BBS. The update includes a new program called **wcDRAW**, which allows sysops to easily create multi-colored ANSI screens. **wcDRAW** is a menu-driven utility to create, edit, and manage the various display files, menus, bulletins, and help files associated with the Wildcat! BBS. It fully supports Wildcat! embedded control codes, allowing operators to customize screens sent to remote callers. For example, @FIRST@ would actually be replaced with the callers first name when the screen is viewed online. Wildcat currently sports some 67 different insertion parameters.

wcDRAW features full mouse support, block copy, move, fill, and stamp ability. Line drawing capabilities allow sysops to select different line types and weights. Because **wcDRAW** reads WILDCAT!'s configuration and conference definition files, the sysop can see how the files look in each conference.

"Our customers have always had to purchase a third party ANSI drawing program in order to create powerful color screens for their BBS," said Jim Harter, President/CEO of MSI. "Creating screens was always a source of frustration for our customers, so we decided to develop a program that would make it fun again."

Version 3.6 was also enhanced to add a scrolling message text feature. Header information such as FROM, TO, and SUBJECT remains fixed at the top of the caller screen while message text longer than a single screen in length scrolls beneath it. The .QWK mail door (TOMCAT) was enhanced to support Fido Netmail messages and Wildcat! continues to be one of the few bulletin board packages supporting file attachments in .QWK mail.

The upgrade is available to current Wildcat! operators at \$20. The Wildcat! software is available in a variety of

TURNING TBBS POSSIBILITIES INTO ...

REALITIES!

Advanced Systems Research, authors and distributes a complete line of applications specifically designed to enable you to exploit all the possibilities of eSoft's powerful TBBS BBS software. We are pleased to offer full support for all the software we distribute.



We carry the complete line of eSoft programs

SUPERCHAT

So many have asked for this one. This is a complete TBBS conference system replacement. Pulling features from Major BBS and DLX this system will not leave you wanting for features. Yes now you can even browse another user while in chat! And we have even put in a few unique features just to insure that TBBS will now have the best chat system. **BAR NONE!**

FILEMAN

At \$119.00, Fileman is the most complete and easy to use file management system for TBBS. With features that include FileOp designation, point and tag file selection, online file description edit, 1024 character descriptions, script file downloading, U/L/D, ratio enforcement, d/l time calculations, Disk Space Information, usage log checking and much much more! Now with **ONLINE GIF PREVIEWING** and **ONLINE ARCHIVE FILE EXTRACTION**. User can extract files from an archive, and tag only those files that they wish to d/l, or they can view docs and readme files from the archive while on-line! New-Automated virus scan and zip comment removal/replacement on uploads!

Also, with enhancements for the Copy-It! module for CD-ROM and DISK LAN based systems. This allows CD-ROM Access with ZERO TBBS impact on LAN based systems. Supports 65 lines and 10 tasks. Fileman now supports CD-ROM carousels and sk-packs. Fileman also has enhancements for TapeMan Online Tape Backup System.

Some options require LAN setup, and Copy-It! software.

COPY-IT!

At \$109.00, Copy-It! is an option that allows CD-ROM and DISC SERVER operations on a LAN. Use Copy-It! with Fileman for GIF preview and Zero Impact File Transfer. Use With TapeMan for Disc Backups without taking down the board! Copy-It! can handle 65 lines with 10 concurrent tasks! Copy-It! also has timed and real time event processing for TMS 1.1 and TIC

ASR's FILEMAN/COPY-IT! combination is the only system to directly support the PIONEER DRM-600 CD-ROM 6 Disc Changer. The DRM-600 is available from ASR at only \$998.00 complete with shipping.

UTILIZE the FULL POTENTIAL of TBBS!

ALSO AVAILABLE FROM

ASR

TPOSS A total sales management system

CLASS ADS

Classified Advertisement Program

PROFMAN

Browse users profiles. Can be used from within Super Chat



CHAT JACK

Multi-Player Blackjack Game with Chat

USER MANAGER II

At \$69.95 User Manager is a complete system user management facility. It automatically adjusts user authorizations based on user subscriptions via credit cards, tracks expiration dates and displays reminders at Sysop determined intervals and automatically updates user information. User Manager has a user profile section that allows keyword lookup, top ten lists, etc.

Call the Advanced Systems 32 Line BBS and SEE FOR YOURSELF!

(702) 334-3317

or contact us for further information...
1475 Terminal Way, Bldg. C-2
Reno Nevada 89502
or call... (702) 334-3304

SYSMON

At \$79.00 SYSMON is a realtime remote control system designed to lock and work just like the TBBS 2.2 console. SYSMON can be configured to handle up to 65 lines including the console. SYSMON can also be used by your regular callers as a system overview and alarm watch system. Many features including complete system usage logging, TBBS application launcher and a duplicate user logging and drop. Version 4.1 now supports EGAS line mode to display all 65 lines on screen at once.

NOW WITH DROP CARRIER DETECT

GotoCommand

At \$72.00 GotoCommand is an amazingly configurable menu jump system. This program has a wonderful interface that can be used by ANSI, ASCII and the new RIP protocol. Give your users a single command to jump to any feature. ANYWHERE ON YOUR BOARD! Each command can be configured to any SDL style authorization. Commands can be made universal, or local to single menu. GotoCommand also has the most unique feature ability of any program on the market. Now make ANIMATED ANSI a part of your menus. GotoCommand also works with LiveWin to allow random messages at each menu. GotoCommand works in conjunction with TBBS key tabs, but allows your callers to use multiple key options.

BULLETS

At \$52.00 Bullets is a highly configurable bulletin display and management system. Bullets is complete with bulletin display by authorization, configurable colors, bulletin list display for bullets that are grouped together, Autocopy modes, forced read and read once modes, and online bulletin configuration. Bullets will even allow you to attach files for downloading, and will execute any valid TBBS SDL entry as a bulletin entry.

**This is just a small listing of available software...
CALL ASR FOR A FULL CATALOG**

ADVANCED[®] SYSTEMS RESEARCH
Employing Science and Technology

BBS MODEM DISCOUNT PROGRAMS

VENDOR	MODEL	LIST	SYSOP	BBS	VOICE	FAX
AT&T Paradyne	Dataport 14.4/Fax	\$555	\$222	813-532-5254	813-530-2000	813-530-2398
ATI Technologies	9600 ETC-E	\$499	\$275	416-756-4591	416-756-0718	416-756-0720
Cardinal Technologies	9600V42 V.32	\$349	\$219	717-293-3074	717-293-3000	717-293-3104
Cardinal Technologies	14400V32bis	\$449	\$249	717-293-3074	717-293-3000	717-293-3104
Computer Peripherals	Viva 9624e V.32	\$349	\$249	805-499-9646	805-499-5751	805-498-8306
Digicom Systems	ScoutPlus V.32bis	\$389	\$210	408-262-1412	408-262-1277	408-262-1390
Digicom Systems	Scout V.32	\$299	\$195	408-262-1412	408-262-1277	408-262-1390
Galaxy Networks	UFO V.32bis	\$999	\$299	No BBS	818-998-7851	818-998-1758
GVC Technologies	FM-9696/144V V.32bis	\$689	\$413	201-579-2380	201-579-3630	201-579-2702
GVC Technologies	SM-96V V.32	\$599	\$329	201-579-2380	201-579-3630	201-579-2702
Hayes Microcomputer	Ultra 144 V.32bis	\$999	\$499	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	Optima 144+Fax	\$519	\$299	404-446-6336	404-840-9200	404-449-0087
Hayes Microcomputer	ISDN System Adapter	\$1199	\$650	404-446-6336	404-840-9200	404-449-0087
Image Communications	Twincom 9600 V.32	\$299	\$279	No BBS	201-935-8880	201-935-6548
Intel Corporation	14.4EX V.32bis	\$549	\$269	503-645-6275	503-629-7000	503-228-9707
Intel Corporation	9600EX V.32	\$599	\$299	503-645-6275	503-629-7000	503-228-9707
Multi-Tech Systems	MT932BA V.32	\$869	\$435	612-785-9875	612-785-3500	612-785-9874
Multi-Tech Systems	MT1432BA V.32bis	\$899	\$450	612-785-9875	612-785-3500	612-785-9874
Practical Peripherals	PM14400FXSA V.32bis	\$549	\$250	805-496-4445	805-497-4774	805-374-7202
Practical Peripherals	PM14400FXMTV.32bis	\$399	\$200	805-496-4445	805-497-4774	805-374-7202
Quadralink Technologies	1496V+	\$360	\$320	416-538-9999	416-538-0101	416-538-1355
QuickComm	Spirit II V.32bis	\$249	\$220	408-956-1358	408-956-8236	408-956-1345
Supra Corporation	SupraFAX V.32bis	\$399	\$249	503-967-2444	503-967-2400	503-967-2401
Supra Corporation	SupraFAX V.32	\$299	\$199	503-967-2444	503-967-2400	503-967-2401
Telebit Corporation	T3000 V.32bis	\$949	\$399	408-745-3229	408-734-4333	408-734-3333
Telebit Corporation	WorldBlaze	\$1049	\$429	408-745-3229	408-734-4333	408-734-3333
Telebit Corporation	QBlaze	\$549	\$299	408-745-3229	408-734-4333	408-734-3333
U.S. Robotics	Courier DS V.32bis/Fax	\$1295	\$449	708-982-5092	708-982-5010	708-982-0823
U.S. Robotics	Courier V.32bis/Fax	\$695	\$299	708-982-5092	708-982-5010	708-982-0823
U.S. Robotics	Courier HST V.32bis/Fax	\$995	\$349	708-982-5092	708-982-5010	708-982-0823
Ven-Tel	EC96 V.32	\$699	\$439	408-922-0988	408-436-7400	408-436-7451
ZyXEL	U-1496 +V.32bis	\$989	\$549	714-693-0762	714-693-0804	714-693-0705
ZyXEL	U-1496E+V.32bis	\$649	\$399	714-693-0762	714-693-0804	714-693-0705
ZyXEL	U-1496EV.32bis	\$469	\$299	714-693-0762	714-693-0804	714-693-0705

configurations starting at \$129 for a single-line version. Mustang Software, Inc. (MSI) claims some 15,000 registered users of Wildcat! BBS software and over 80,000 registered users of its Qmodem communications software. Mustang Software, Inc., PO Box 2264, Bakersfield, CA 93303; (805)395-0223 voice; (805)395-0713 fax; (805)395-0650 BBS.

CUSTOMS SERVICE WARRANTS FOR CHILD PORNOGRAPHY

The United States Department of the Treasury U.S. Customs Service con-

ducted an early morning nationwide crackdown on bulletin board users March 4, 1993 serving 31 search warrants in 15 states and 30 cities. The warrants were served by over 300 federal, state, and local law enforcement officials on suspicion of illegal importation, distribution, sale, and use of high-technology exchanges of child pornography.

The crackdown was the culmination of a year-long undercover Customs service operation known as "Operation Longarm." It is the largest anti-child pornography effort ever mounted in U.S. history. Between federal and state search warrants, a total of 40 locations

were presented with warrants. Over 100 customs service agents were involved in the investigation over the past year.

Operation Longarm was conducted from the Custom's Service's Miami office and is the held to be the first long term investigation by the service of computer bulletin boards. The operation began in March 1992 when Customs agents ran a sting operation against a man in Dade County Florida. As a result of this operation, the service became aware of a bulletin board titled BAMSE operated in Aalborg, Denmark by Kai Kanstrup. BAMSE apparently was a subscription service offering hundreds of GIF images

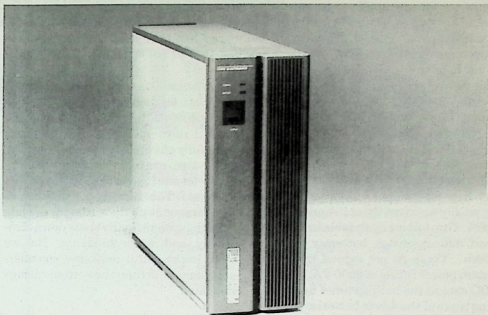
of children involved in sexually explicit conduct. On May 12, 1992, police in Aalborg seized the BBS computer system, and all subscriber records along with hundreds of photographs depicting child pornography.

Police in Denmark provided materials to the customs service in June 1992 which brought to light that over 100 subscribers to BAMSE were U.S. citizens. The Customs Service subscribed to a second BBS in Denmark, titled SCREWDRIVER and gained access to its membership lists which included names and addresses of U.S. citizens. In September 1992, an undercover agent infiltrated a third bulletin board in Denmark titled VESTBJERG where he downloaded several hard-core child pornography pictures. On October 6, Danish police served a search warrant at the residence of Mr. Carsten Lund, operator of SCREWDRIVER and on October 14, they likewise raided the residence of Mr. Benny Mortensen, operator of VESTBJERG. Additional information on U.S. citizens were obtained in these raids. Of the warrants served here in the United States, few actually involved bulletin boards - most were callers to the bulletin boards in Denmark.

EXIDE PERSONAL 2000 UPS

We take electrical power for granted - until it is gone. Fortunately, 120VAC power in the United States is fairly reliable - an enormous comfort if the document you've been working on for the last four hours goes up in smoke because of a 5 minute power outage. For bulletin board system operators, the situation is even more critical. If you have 20 users online, and your power goes out, they are dumped rather unceremoniously into the ether. Since power didn't fail at their location in most places, they tend to get irritated if the outage occurred 450KB into a 500KB download.

The answer is the Uninterruptable Power Supply or UPS. One of the least exciting topics we are likely to address in Boardwatch, but for some installations, a necessary one. Not only can power outages be inconvenient, they can actually damage equipment in cer-



**Exide Personal 2000 UPS 1300 watt
uninterruptible power supply**

tain circumstances. A UPS typically serves to filter out transient voltage spikes and noise from the AC waveform - protecting your equipment from damage caused by line voltage variations. Further, a UPS provides at least a few minutes of battery backup power. This allows an orderly shut down of your equipment in the case of a long outage, and often all you need is to save the current document you are working on to make the difference between minor annoyance and a disastrous loss of work. In the event of the more frequent 5-minute outage variety, a UPS will be enough to keep you going right through the blackout.

We recently played with one of the best UPS we've seen. The Exide Personal 2000 Uninterruptable Power Supply, is almost overkill even for a multiline BBS. The unit is rated at 2000 volt-amperes (VA) - about 1300 watts and includes battery backup. An optional \$149 serial communications card allows you to set up your computer to monitor the UPS operation and perform an orderly shut down if necessary. They do offer an automatic shutdown software option called OnliNet that will actually monitor the port and detect a signal from the UPS when the batteries run low, and

perform an orderly shutdown of all equipment before the battery backup runs out.

UPS are generally rated in watts and come in sizes from about 300 watts on up. Basically, you add up the total wattage of your system and buy one a little bigger than the total. The average PC consumes about 150 watts while file servers with large drives etc. can run as high as 275-350 watts. A color monitor uses about 60 watts. Modems typically use a small 200ma plug in power supply - typically 15-20 watts each. A standard PC, monitor, and modem would run about 250 watts.

Exide actually makes UPS systems rated at up to 1000 kVA (6,500,000 watts) with their model 3800ES and down to 350 VA (250 Watt) unit with the Personal Powerware Model 500. The Model 500 carries a list price of \$649 while the Model 3800ES typically lists for about \$400,000. Actually, you can install up to 13 of the 3800ES units for a 13000 kVA total capacity if power is what you need.

The unit we looked at was the Personal Powerware Model 2000. It could handle roughly 5 PC's with monitors and mo-

demons, or for our application, two PCs and 15 modems rather handily with room to spare. One of the overriding questions everyone has about UPSs is "how long will it run the system when the power goes out?" This is where having a bigger UPS than you need comes into play. The 2000 will support a 1000 watt load for about 15 minutes, or a 400 watt load for about 50 minutes.

The model 2000 with a 2000 VA capacity lists for \$2699. Individual dealers typically discount these list prices up to 20%. The unit is expandable in that you can add extension batteries at \$539 each. These do not extend the maximum power rating of 2000 VA, but they DO extend the backup times by providing more of the 48vdc batteries the system uses. Under a 750 watt load, for example, this extension battery will add about 23 minutes to the backup duration. You can very easily remove the side cover on this unit and slide on an additional battery extension and these daisy chain more or less endlessly. The battery extenders are packaged so that they blend completely into the look of the overall unit. The overall package, though heavy, is sturdily built with metal cabinet. It's a handsome enclosure - if that matters.

The batteries fully charge in about 8 hours. We had ours on for six when coincidentally, the power went out for about 20 minutes - a serendipitous test event under real world conditions. Our PCs operated without a single dropped character with 10 people on the Boardwatch BBS. The green light on the UPS went red, and a not terribly obnoxious chirping alarm sounded every few seconds. No maintenance, no reset, no problem.

The UPS is available in configurations for 120 or 240 VAC. Our 120 VAC unit posed a minor inconvenience in that it features an odd type of electrical plug designed for 20 AMP circuits - one blade of the three prong plug is turned sideways. A little investigation at a local hardware store revealed that indeed there is a particular type of receptacle for this that is supposed to be used with 20 amp circuits to differentiate them from the more common 15 amp circuits. Unfortunately, most buildings, even

those that have 20 amp circuits, use ordinary electrical receptacles. We actually had to replace our receptacle to use this UPS.

We calculate we were putting about a 750 watt load on the Personal Power Model 2000. After running the UPS for several days to ensure the batteries were fully charged, we pulled the plug. Our system ran continuously on battery power for one hour and 41 minutes (101 minutes). The chirping alarm becomes more frequent as the batteries deplete until the system finally shuts down completely, and rather suddenly. But we were impressed it delivered considerably longer life than the system ratings indicated.

The company is a bit of an enigma. Like many corporations selling to the computer community, they have a system of dealers who support the product. As a result, we found they don't know what the price of anything is, and don't know much else about it either. They prefer to refer you to a dealer. Interestingly, the dealers we talked to don't know anything either. More accurately, we're told that each sale is different depending on quantity and installation. Translated - whatever price we think we can get from the boob on the other end of the phone. Another interesting thing is that for years we have heard of Exide batteries. This UPS uses batteries - from Yaesu.

Despite this, the Exide unit looks to be the Cadillac of UPS systems. They carry a two year warranty, on everything except the batteries (???? - isn't that what most of this thing is????). But it works well, and offers connections to LANs or serial ports. Exide Electronics, 8521 Six Forks Road, Raleigh, NC 27615; (800)554-3448 voice; (919)872-3020 international; (800)75-EXIDE fax.

RUSTY & EDIE'S BBS BACK ONLINE

In our story last month on the seizure of Rusty & Edie's BBS, Russell by the end of the month. True to his word, as of February 26th, Rusty & Edie's BBS was back online with 32 lines. The system is

available at (216)726-2620 sporting a whole bevy of new ZyXEL modems and a new location in Youngstown. Rusty & Edie's BBS, 7393 Clairfaine Ave. #7, Youngstown, OH 44512; (216)726-4217 voice; (216)726-3595 fax.

SOFTWARE NOTES

IMPROVING ON WORDPERFECT

By Jim Thompson
Western News Service

Word processors have been around for so long that they can no longer be considered exotic or even exciting. But that does not mean they are not an important weapon in your computer arsenal. Aside from the operating system itself, Word processors are still the most used of all computer programs.

In the world of word processors, WordPerfect is among the top echelon. WordPerfect is the best selling DOS word processing package for the PC. Although the Windows edition of this program has been a bit slower in gaining popularity, the newest version also promises to take a dominate role in the word processing wars.

Here is a list of some of the best shareware programs for WordPerfect.

REAL LAW

This program provides a menu driven system for automating some of the more mundane tasks in a legal office. Specifically, it helps in the handling of forms and form letters.

Among the forms provided are affidavits, motions, depositions, orders and petitions. REAL LAW allows you to load the forms in WordPerfect, fill in the blanks and then print them. The demo version includes seven forms. If you register the program, you will receive more than 110 forms - virtually every form normally required by a law office.

The real power of REAL LAW comes when you generate a client database.

WILDCAT! BBS

Wildcat! leads the pack when it comes to features, performance and innovation. MSI was the first to include offline mail reading software in a BBS package, the first with MHS support, and is the only company to offer NetWare bindery access and a multiline product that runs eight lines with separate DOS sessions on a single PC. There's a Wildcat! version for just about any application from a single-line neighborhood BBS to a wide-area network system.

Check out these features!

- XMODEM, YMODEM, ZMODEM, YMODEM-G, 1K-XMODEM-G and KERMIT.
- Multi-line operation of 250 nodes, up to eight on one PC.
- DOORS
- 1,000 message conferences, file areas and security levels.
- Full-screen message editor with quoting.
- File attachments to messages.
- Text can be uploaded into a message.
- File marking while viewing for later download.
- Operates with virus checking software.
- Full sysop maintenance when system is taking calls.
- 1,000 configurable events per node.
- Relational links between the message area, file area, and user databases, allowing the sysop to access related records.
- Enhanced support for CD-ROM files and changers.

We have the best value in BBS software. You don't have to buy an add-on mail door or add a program to make it do simple Zmodem downloads! The popular remote control program DOORWAY is even included FREE with the IM version of WILDCAT! You not only get the most for your money when you make your initial purchase, but you get full credit for your software investment when you upgrade it to support extra lines. We appreciate our customers.

Check out these prices!

The Wildcat! Single Line release supports one incoming phone line on a single PC or network workstation. It also lets you run your BBS in the background under DESQview! **\$129.00**

A great entry-level BBS or office system, **Wildcat! Multiline** handles 1-10 incoming lines. It can operate on a LAN where all ten lines can be dial-in or local access. Installed on a single PC under DESQview, Wildcat! Multiline is able to handle up to four incoming lines plus local access. **\$249.00**

The Professional Multiline release supports 1-250 incoming lines or local LAN connections, and has all the same features of the other systems, including DESQview support. **\$499.00**

The Intelligent MultiPort (IM) version is a special release of WILDCAT! that communicates only with the DigiBoard Intelligent Multi-Port card. Using WILDCAT! IM you can connect up to eight external modems via an octopus cable to a single 486 using the multitasking program DESQview from Quarterdeck Office Systems. Multiple DigiChannel PC workstations can be linked together on a LAN to provide 16, 24, or even 32 or more lines since the IM version supports up to 250 connections. **\$799.00**

If you haven't tried Wildcat! you haven't experienced the best in BBS telecommunications today. **For a free copy or our Test-Drive version, call 1-800-999-9619 and ask for offer #WB100.**

See Us At



COMDEX/Spring '93

The World's #1 Computer and Communications Marketplace
for Resellers and Corporate Decision Makers

May 24-27, 1993

Georgia World Congress Center • Atlanta, Georgia USA



Redefining Telecommunications in '93

SHAREWARE FOR WORD PERFECT

REAL LAW PROGRAM (AUTOLAW.COM)

AA Computer Learning Center
101 N. State Road 7 Suite #7
Margate, FL 33063
Requires WordPerfect 5.1 — will not
work with earlier versions Registration
Fee: \$59.00, plus \$5.00 S&H

UMLAUTER

(UMLAUTER.ZIP)

Available for download on American
Online
Registration Fee: Free

HEBREW KEYBOARD

(HEBWBK.ZIP)

Alan Z. Fromm
CompuServe: 72070,1427
Registration Fee: Free

MACROADE

Jeffrey S. Kane
Performance Sciences International
3001 Latta Drive, Suite 1250
Summerfield, NC 27358
Registration Fee: \$25.00
(includes unlimited telephone support)

WPTOOLS 5.1

Jim Seidman
Software by Seidman
2737 Devonshire Pl. NW
Washington, DC 20008
Registration Fee: \$25.00 for WPTOOLS

COMPARE

James H. White
Whiteware
8544 Bryan
St. Louis, MO 63117
Registration Fee: \$20.00

TRAINING FOR WORDPERFECT

(WP50TUT.ZIP)
James Dietrichs
R&D Associates
12228 Venice Blvd, Suite 467
Mar Vista, CA 90066
Registration Fee: \$33.00
(Includes all three volumes of the tutorial)

With more than 70 fields, the database allows you to compile some very sophisticated statistics about your clients. This same database information is used to fill in any of the various forms automatically.

The database and forms are tied together with an excellent menuing system which guides you through the entire process of creating the forms and adding information relating to an individual client. When you call a form to be filled in with information relating to a client from the database, all related forms are also generated.

UMLAUTER (UMLAUTER.ZIP)

Typing special characters used in foreign languages can be a big problem in WordPerfect or any other word processor. If German is your language, then UMLAUTER is what you need.

German and a number of other languages require an umlaut (two dots) above certain characters. Umlauter consists of seven macros that allow you to insert the special umlauted characters and the German double "s" character. It's simple to use and free for the asking.

HEBREW MACRO AND KEYBOARD SET (HEBWBK.ZIP)

This program uses a combination of macros and WordPerfect's capability to re-map the keyboard to create the Hebrew character set. If a character is not available in the normal character set for the selected font, the character is printed as a graphic of a size and style that matches the font being used. The program also enters characters from right-to-left, as is normal when writing in Hebrew.

The one major drawback is that you cannot see the Hebrew characters as you type. Instead of the Hebrew characters, token characters are displayed. Switching to display mode (Shift-F7, 6), displays what was typed.

The documentation is a bit on the light side, but with a little work it isn't too hard to sort out.

MACRO CREATION AND EDITING TOOL (MACROADE)

Creating macros in WordPerfect is easy — editing those same macros is another

story. WordPerfect's macro-editing tools are awkward at best. Since macros are stored in a special format, they also cannot be edited as a text file by WordPerfect or any other word processor. So, what do you do? Get MacroAde.

MacroAde is a great little tool for converting WordPerfect macros into an ASCII text file and for converting macros written as text files into WordPerfect macro format. This allows you to use WordPerfect or any other word processor that creates ASCII text to create your macros.

There is also a utility which will check your macros for missing tildes and one that imports external data for use as macro variables. You will also find a list of all macro and keystroke commands and codes and a utility to convert macros to version 5.1.

An easy-to-use menuing system takes all the mystery out of creating macros in WordPerfect.

WPTOOLS 5.1

This package contains several useful programs. It is a must for anyone using WordPerfect. Included in the package are the following:

WP5LOOK. This nifty little program allows you to view WordPerfect files outside WordPerfect exactly as they will be printed. It recognizes WordPerfect formatting characters and uses them. WP5LOOK also allows you to search for text within a document and to display multiple documents.

LISTMACS. This program looks at the macro (.WPM) or keyboard (.WPK) files in a directory and lists the names and descriptions of the macros in the files. It can handle up to 1,000 macros — a great way to keep track of the macros you may have forgotten.

WPGSIZE. This provides additional information about .WPG graphics files. It will tell you the dimensions of the "image coordinate space" and display the width and height in inches.

FONTFILE. This will make a list of the downloadable font files used by a speci-

fied .PRS (printer driver) file.

FONTLIST. This program will look at a WordPerfect document and list the names of the fonts it uses and the .PRS file required. It's very useful if you receive a document from someone else and are not sure how to print it.

WPSNOOP. This program provides a way to determine if a file was created in WordPerfect or was produced by another WordPerfect product. It will also tell you what .PRS file and printer are needed to get a printout.

COMPARE

COMPARE does a word-by-word comparison of two WordPerfect documents, then creates a third document which indicates the differences between the two. COMPARE marks individual words not just on a phrase level like Word Perfect's own comparison feature. Any word added to the newer document are marked with a double underline, deleted words from the older document are shown in redline.

You can also change the display if you wish. An additional program lets you use strikethrough, brackets or < > to mark deleted words and underlining, double-underlining or boldface to mark new words.

COMPARE will not work with files larger than 64K. Despite this limitation, it's a great little program.

TRAINING FOR WORDPERFECT (WP50TUT.ZIP)

Although the name implies that this is a tutor for WordPerfect version 5.0, it is equally useful for learning version 5.1. The full registered version of this program consists of three volumes. You will get volume one, a fully function, although limited version of the program, with the original download and its yours to use at no charge.

Training for WordPerfect does not require that you own the word processor. This is

nice for those who want to get a feel of the program before they buy.

The package includes instructions on all aspects of document manipulation, including how to move and copy text, the use of special printing effects, formatting and the use of the Spell Checker and Thesaurus. The simple, straight-forward menus will have you using this excellent program in a matter of minutes, even if you don't read the documentation.

[Jim Thompson is Managing Editor at Western News Service in Los Angeles, California. He also operates the Philip Morris Racing Information System BBS used by over 400 journalists to access up-to-the-minute automobile race results and track-side reports. He can be reached by e-mail at 321-4127@mcimail.com - Editor]

ANSI Music

by Alan D. Bryant

The online world is laced with numerous methods and approaches to communicating by modem. One of the most obscure is so-called ANSI music, a way to play basic music on a caller's PC online.

By today's standards, ANSI music isn't much — if you're expecting stereo high-fidelity music through your SoundBlaster card online, forget it. ANSI music provides the online equivalent to a child's toy piano — only a little less complex than that. For all it is not, ANSI music is a well supported de facto standard method to jazz up the online interface a modem user can enjoy.

Technically, ANSI music is a single-voice way to play simple melodies. A "single voice" means that only one

note can be played at a time, precluding the use of chords or multiple overlapping music sequences. The sound generated by an ANSI music capable terminal program is, therefore, not anything stellar. Still, a well written ANSI music sequence can have a lot of life to it, with quarter notes, whole notes, sharps, flats, rests, and several octaves of range available.

ANSI music itself, as the name suggests, is sent as a variation of the ANSI escape sequence — the same type of mechanism used to control the cursor and color attributes between a host (BBS) and the remote (a caller). Like any other ANSI escape sequence, it begins with the escape character (ASCII 27), followed by a left square bracket ([). ANSI music sequences are then followed by a capital letter "M", an encoded music sequence, then a Ctrl-N character (ASCII 14).

The encoded music sequence is a string of characters that conforms to the format of the PLAY statement in the BASIC included with virtually every IBM or compatible PC. If you have a BASIC manual that came with your computer, you have the information you need to create a music sequence. The characters used are shown in the accompanying table.

Although it's possible to create ANSI music "by hand" it's a fairly laborious process. Enter **Melody Master**, a shareware music composition program written by Russian emigre Alexei Efros, Jr. Using a graphical interface consisting of the musical scales, Melody Master allows you to "type" notes and rests on the scales in the same manner as a composer writes music. Sophisticated single-voice melodies become an interesting and fun experience to create.

Melody Master exists primarily to teach children and adults alike the principles of music notation and structure. The

In ANSI music, "My Darlin' Clementine" looks like so:

```
^MFMNT150L803C.L16CL4C<GP64L8>E.L16EL4ECL8C.L16EL4G.L16G      ^N
^MFL803F.L16EL2DP32L8D.L16EL4FFL8E.L16DL4ECL8C.L16EL4D<GL8B.L16>D      ^N
^MFL203CP8L8C.L16CL4C<GP64L8>E.L16EL4ECL8C.L16EL4G.L16GL8F.L16E      ^N
^MFL203DP32L8D.L16EL4FFL8E.L16DL4ECL8C.L16EL4D<GL8B.L16>DL2CPS      ^N
^MFP64      ^N
(^[ = Esc, ^N = Ctrl-N)
```

program comes complete with 100 music files to get you started, which you can simply listen to, view to see how others put songs together, or edit to hear the subtle effects of minor changes. Melody Master uses its own format for storage of music files. Once you get a melody you like, exporting the file to ANSI format consists of a few simple keystrokes. For people who want to generate ANSI music, the only drawback to the program is that it can't read pre-existing ANSI music files — only its own native format (and that of a similar program, Piano Man). If your goal is to create your own music (or to place one of the 100 stock songs online) Melody Master fits the bill nicely.

With no pre-existing knowledge of music, we were able to place some notes on the scales and get something that vaguely resembles a melody of some sort. The program's editing capabilities are somewhat klunky and non-intuitive, but you quickly get the hang of it. After typing any number of notes, you can easily play the tune from the beginning or from your current location in the composition using "debug play" mode. For interesting musical analysis, you can even play your compositions backwards. Registration of the shareware package costs just \$19 (plus shipping) for personal use; \$49 for commercial use. Registered copies include even more songs than the shareware version. (Melody Master Version 2.1, by Alexei A. Efros, Jr., 4544 South Brockbank Dr., Salt Lake City, Utah 84124. Sold by Shareable Software International, P. O. Box 59102, Schaumburg, IL 60159; 800-622-2793 Voice.)

Once you have ANSI music, the next hurdle is enabling your users to hear it. Many communications software packages support ANSI music, but many others don't. Qmodem has long-supported the standard, and older shareware versions as well as the latest Qmodem Pro feature it. GT-Powercomm is another choice. The popular Procomm Plus and Procomm Plus for Windows, however, do not include ANSI music support. Even if a program does not support ANSI music, however, its presence is simply ignored in the communications software we

tested — provided the program has its ANSI mode enabled.

One of the interesting effects of ANSI music is that the compositions are generally small in terms of the number of bytes, and therefore transmit quickly. The ANSI music implementations we've seen (such as Qmodem) play the music in the background with proper timing, while the session online continues normally. This allows for special effects, such as putting ANSI music at the beginning of a screen display; the screen can be painted while the music plays. It's an interesting way for BBSsysops to, for example, say "Happy Holidays" in animated ANSI while "Jingle Bells" plays in the background.

Table of Single-Character Commands Used for ANSI Music Sequences

A-G{#,+,-} - A-G are notes. # or + following a note produces a sharp; - produces a flat.

L(n) - Sets the length of each note. L4 is a quarter note, L1 is a whole note, and so on. "n" may be from 1 to 64. Length may also follow the note to change the length for that note only. A16 is equivalent to L16A.

MN - Music normal. Each note plays seven-eighths of the time determined by L (length).

ML - Music legato. Each note plays the full period set by L.

MS - Music staccato. Each note plays three-quarters of the time determined by L.

N(n) - Play note "n". "n" may be in the range from 0 to 84, such as N45. In the 7 possible octaves, there are 84 notes. n set to 0 indicates a rest.

O(n) - Sets the current octave to "n". "n" may be in the range 0 to 6, such as O5. The default is 4. Middle C is at the beginning of octave 3.

P(n) - Pause. "n" may be in the range from 1 to 64, such as P25.

T(n) - Sets the tempo to "n". "n" may be

in the range from 32 to 255, such as T127. The default is 120.

. (period) - A period after a note increases the playing time of the note by 3/2 times the period determined by L (length of note) time T (tempo). Multiple periods can appear after a note, and the playing time is scaled accordingly. For example, A. will cause the note A to play one and one half times the playing time determined by L times T; two periods placed after A (A..) will cause the note to be played at 9/4 times its ascribed value; an A with three periods (A...) at 27/8, etc. Periods may also appear after a P (pause) and increase the pause length in the same manner.

>n - A greater-than symbol preceding the note "n" plays the note in the next higher octave.

<n - A less-than symbol preceding the note "n" plays the note in the next lower octave.

FAX/OCR SOFTWARE: NOT READY FOR PRIMETIME

There was a little girl,
Who wore a little curl,
Right in the middle of her forehead.
When she was good,
She was very, very good.
And when she was bad,
She was horrid. - Traditional limerick

By Thom Foulks

That's the current state of fax/OCR software, I've learned, after weeks of trying to put it to productive use and learning how others are using it.

An author faxed to himself the typed manuscript of a 1970's book he needed to update, then used OCR (optical character recognition) software to convert it to word processor files. A Braille instructor is faxing pages of learning materials to herself, using OCR software to convert it to computer text, then other software to send it to a Braille printer.

Fax and OCR, especially computer-to-

computer, are a marriage made in heaven — when everything works right. Fax and OCR, when dealing with older fax machines and copying-machine copies, are a shotgun wedding at best...a nightmare, at worst.

I've looked at five fax/OCR packages, and asked my BBS users how they've been using this new coupling of super-sophisticated software and high-speed faxmodems. The products are Intel's FAXability Plus/OCR, Calera's FaxGrabber, Caere's AnyFax (in Delrina's Winfax Pro), Bitfax/OCR for Windows (also AnyFax-based), and Ocron's Perceive Personal. Along the way, I also checked the unique capabilities of Cardiff's Teleform, a forms-based system that converts incoming fax images to database information.

(For those who may wonder what all this foofarah is about, remember that a fax transmission is a graphics image, similar to that produced by a copying machine. OCR software must be used by the fax receiver to convert the black-and-white characters of the image into

text usable by the computer for word processing, spreadsheets, etc.)

Typically, reviews of such products play a numbers game: Comparing percentages of accuracy in actual recognition of the graphic-image text characters. The products in this marketplace are wont to promise accuracy of "up to 99%" — in fact, every one of the above products met or exceeded that figure, under the right conditions. Remember, however, that "99%" means the potential of one error character in every 100 characters; and a page of correspondence well may contain 1,000 characters.

UNDER THE RIGHT CONDITIONS! Never has the time-honored "GIGO" (garbage in, garbage out) computer-age acronym been so appropriate. As example, none of the above did even a reasonable job of converting the text from a copier copy of a triple-column magazine page that also contained a picture, a graphic and a boxed ad.

On the other hand, all did well when the same magazine columns were scanned



(by Logitech's ScanMan 256) as individual columns, converted to the appropriate input file format, and fed to the OCR software...a process almost as time-consuming as simple fast-typist retyping of the text from the magazine.

With clipboard in hand, I tried to logically, methodically, statistically compare the output of these various OCR packages. I could throw a lot of numbers at you — but the sheer fact is,

Wouldn't it be nice to be able to "PLUG IN" a CDROM Disk then take a vacation from your BBS?

Well, we have one that can do just that...

With 5800+ of the latest shareware files to keep your users happy!

PIER 1™

None of that "OLD SCITUFF" crammed on this disk! In fact we'll even give you a FREE Sony Style Caddie to hold this little "JEWEL"!

The MARkeTplace!

P.O. Box 10925 St. Louis, MO 63135

1-800-289-1ROM

\$59.00

Please add \$5.00 Shipping

The goal is simple: To increase the access and profitability of your BBS, and do it in an easy, economical way.

The answer is simple: Work with a network carrier who has the technology and resources already in place to make it happen right now . . . at the lowest price.

Utilizing its X.25 packet-switched network, the ADP/Autonet Division can help a sysop become a nationwide, or even international, business practically overnight. Autonet provides the PDN (or VAN) needed to transmit data for the BBS. It literally puts ADP's network to work for the sysop.

The X.25 protocol, in addition to being economical, also offers superior error-checking capabilities and ensures error-free transmission.

If you want to expand your BBS at the lowest possible cost, call today. We'll rush you a free information packet that will show you how a sysop can grow fast with ADP/Autonet.

1.800.827.8254



Autonet Division

175 Jackson Plaza, Ann Arbor, Michigan 48106
Phone: 313.995.6501, Fax: 313.995.6458

© Copyright 1993, Automatic Data Processing

**GO
NATIONWIDE
WITHOUT GOING
BROKE**

Need freedom from BBS LOCKUPS?



If you are serious about your BBS, we are serious about keeping it online. The Computer Sentinel is an intelligent microprocessor device which automatically monitors your BBS and restarts your BBS when a lockup occurs. No need to call the BBS to fix it; with the Computer Sentinel, your callers do that for you.

No TSRs or motherboard slots required. The Computer Sentinel is a stand-alone device which connects between the external modem and your BBS computer. It can electrically press your computer's reset switch, or it can cycle power using optional power control modules. Designed for all lockup conditions, multiple nodes, LANs or multitasking.

Daily EVENT activities can also be monitored for lockup conditions. If your BBS is unattended for hours or days at a time, the Computer Sentinel is for you! Call today while the Limited SYSOP Special Price of \$169.00 is still in effect.

Access Solutions Corporation - 18 Ivy Lane - Cherry Hill, NJ 08002
Orders & Info: (609) 667-7628 - BBS (609) 667-5652

COMPUTER SENTINEL

OCR PRODUCTS

BitFax/OCR for Windows 2.05

Bit Software
47987 Fremont Blvd.
Fremont, CA 94538
510-490-2928
510-490-9490 (fax)
MSRP - \$129

FAXability Plus/OCR 1.0

Intel Corp.
5200 N.E. Elam Young Parkway
Hillsboro, OR 97124
800-538-3373 or 503-629-7354
503-629-7227 (fax)
MSRP - \$249

WinFax Pro 3.0

Delrina Technology
800-268-6082 or 416-441-0774
416-441-0774 (fax)
MSRP - \$129

FaxGrabber

Calera Recognition Systems
475 Potrero Avenue
Sunnyvale, CA 94086
408-720-8300
408-720-1330 (fax)
MSRP - \$149

Perceive Personal for Windows 2.0

OCRON, Inc.
3350 Scott Blvd.
Santa Clara, CA 95054
408-980-8900
408-980-5100 (fax)
MSRP - \$179

Teleform 2.0

Cardiff Software
531 Stevens Ave.
Solana Beach, CA 92075
619-259-6430
619-259-6450 (fax)
MSRP - \$995

don't let ANY one tell you they can be analyzed in such a fashion. The problem is, too many variables.

As example, I fed a 14-page computer-generated fax using common Arial (from Word for Windows 2.0) to WinFax Pro's OCR mode. It scored close to

99%. Then, I fed the same file — with Times Roman as the font — through the same procedure, and the output ASCII text was pure gibberish. Yet, Perceive Personal gobbled in the same Times Roman file and the output would have been usable with only short editing. So, then I fed the same file to BitFax/OCR, with similar results — except for one classic omission: Every sentence-ending period was lost!

From WordPerfect for Windows, I sent a fax of a help file — Courier font — to BitFax/OCR, and it found all the periods; but didn't recognize "b", "y" or scattered other characters. From a distant city, a friend faxed me a 10-page report from WordPerfect for DOS, via Intel's DOS SatisFAXtion software. My name was in the report, several times, always as "Thrm Frulks" — along with inconsistent other missing characters.

Consistently, NONE of the products did a good job of handling margins. Paragraphs with the first word indented would confuse the "recognition" process, leaving a jumble of scattered words across the output page. WinFax Pro 3.0 occasionally told me "an error had occurred" referring me to the manual with NO clue as to WHAT error occurred. (All of the products are heavy RAM users; my test machine, a 386DX/33, had 8MB of RAM.) The same file, fed to Perceive Personal, came through with "w" recognized as "i" and "y" consistently missed.

Sampling all the programs also revealed a welter of file formats to deal with. Although each would accept PCX files, none of them receive fax transmissions directly in a PCX format — there's always a conversion step. WinFax likes only its own files, FXR and FXS; FAXability wants DCX files, but you must "save" SatisFAXtion's RCV files into the DCX format. Perceive Personal (targeted more at scanner users) likes TIFF files. Only FaxGrabber would handle PCX, DCX, and TIF.
Etc., ad infinitum.

Teleform stands unique in this group, in that it doesn't deal directly with text, and it expects that its input has

been fax machine generated. In practice, the user fills out a plain-paper form of checkboxes and sends it to a Teleform-equipped receiving computer. The data is read from the boxes, and inserted directly into a database. This is a slick business application, although not text-based in the usual sense. My testing produced superb results — but it's not a product for OCRing a faxed letter.

OK, Thom, let's try to formulate some recommendations from all this. Here they are.

1. Take those "up to 99%" promises for just what they are; and keep in mind that the remaining 1% means one character wrong out of 100. That means you might have read 60 or so errors up to this point, in this short article. Editing the output is a must; and the potential of using OCR to read numbers reliably is downright scary.

2. Computer-to-computer fax transmissions (avoiding the copying phase of a fax machine) can't be expected to dramatically improve performance, as I had hoped. The improvement was only slight, and some very common scalable fonts produced mishmash output. Even under the most controlled conditions, OCR success mysteriously varies.

3. The most versatile performer is FaxGrabber, which many users may have received as part of a bundle with an earlier version of WinFax Pro. If your OCR plans involve scanning, then opt for Perceive Personal — easy to use, easy to set up, and provides the best runtime display of the actual OCR process. However, the Caere AnyFax module in BitFax/OCR appears to be the fastest of the group; in fact, BitFax/OCR is a solid performer as a fax handler, and supports the CAS standard of SatisFAXtion modems.

4. If you've read to here, you can understand why I suggest you may wish to wait for the next generation of such software. This marketplace is really not quite ready for primetime.

[<MI>Thom Foulks has served as a computer consultant, founding host of Computing Success! radio show, and

columnist. Foulks also wrote his own Message Hub BBS software package and operates the <BI>Cache la Byte Hub BBS<MI> at <BI>(719)528-8545<MI>. - Ed<D>]



DIGITAL IMAGING AND MARLBORO RACING NEWS

By Jim Thompson
Western News Service

Digital Imaging offers a news promise for the future of on-line computer systems. Digital cameras and scanners are opening the door to a brave new world of high quality photographic images for both the professional and the hobbyist.

Professional Digital cameras offer the ability to instantly capture 24-bit, 1524x1012-pixel resolution images. High-end scanners can deliver 4,000 DPI quality from color negatives or transparencies. Once captured, the images are immediately ready for transmitting anywhere in the world.

Of course, it will be sometime before the cost of most of this equipment gets down to a point where it is available to the masses. But the technology is available and in use today. Major news gathering organizations around the world are rapidly converting their photographic departments to all-electronic image processing centers.

The L.A. Times, for example, started assembling their electronic darkroom in 1986. Terry Schwadron, assistant managing editor for graphics spearheaded what the Times calls "the Editor Color Project." According to Schwadron, the goal is to "remove the walls between the photo, art and prepress departments." Electronic cameras and scanners are making this a reality.

The day is quickly approaching when film, at least in the fast-paced world of the photojournalist, will be nothing more than a curiosity of the past. But, there are still many problems that must be overcome. The format fight is raging

and what we have is a technology in search of a standard.

As managing editor of Western News Service and Sysop of Marlboro Racing News, I have been intensely occupied with creating a BBS system for the exchange and display of high-quality electronic images.

As the Official IndyCar News Service, Marlboro Racing News provides news coverage and statistics on IndyCar racing. It is open only to journalists, major news organizations, Indy Car teams and sponsors. Currently, more than 400 journalists rely on this system for immediate and accurate information about the world of Indy Car racing. We are concerned not only with Marlboro Racing Team Penske drivers, Emerson Fittipaldi and Paul Tracy, but with all teams, races and news concerning the IndyCar series. But information is not always enough. To capture all the drama and excitement of this or any sporting event, newspapers need full-color, action photos.

The hand writing was definitely on the wall. Since we began operation two years ago, it was clear that we needed to offer color photographs along with the editorial material. It certainly didn't take a genius to realize that we needed to get into an electronic photo system right away. I am happy to report that journalists tapping into Marlboro Racing News will have access to full color photographs during the 1993 IndyCar season. This system is now in the testing stage and will be officially unveiled in time for the 77th running of the Indianapolis 500.

For the first time anywhere, journalists can see the pictures that will be used to illustrate their stories, on their own computers, before their newspaper or magazine is even printed. For the first time, newspapers will be able to receive a full-color photo, ready for publication even before the race has finished.



Jim Thompson - Photo taken with Kodak DC3 Camera . Image acquired by Photoshop running on Mac and transferred by modem to PC running Photostylr.

In this, and succeeding articles, I will pass along what I have learned about capturing, distributing and displaying photos on-line. I will also discuss solutions I found to some very vexing problems including image exchange between PCs and MACs, interfacing with Associated Press proprietary systems and displaying the images on-line.

This is a world of land mines and not for the faint of heart. I spent months researching the current equipment on the market. Time and again, just when I thought I had all the answers, a new wrinkle developed. Usually, the problem was sales staff, company representatives or technical personnel who simply did not know the capabilities or the limitations of their equipment.

In some cases, it was both shocking and disappointing. When an official company brochure says one thing and the technical staff says another, one quickly begins to question whether any of this equipment will ever work. It is especially disheartening when you are staring at a bill that is pushing the \$50,000 mark! Yes, it will work, but one has to be extremely careful.

One of the problems is that so much varying technical expertise is required. I found people who were absolute experts with Macintosh computers, but had never touched a PC. Some knew all about the Associated Press system, but had no idea about how to connect with anything else. In some cases, technical representatives told me that their equipment was capable of connecting with other system, but when confronted with explicit questions about how to do this, finally admitted that they had no idea.

So, beware all ye who wish to journey to the land of the digital image, for it is fraught with danger. It requires a thorough knowledge of what you want to accomplish, the brass to ask plenty of questions and nerves of steel.

But let's take it a step at a time. Before you can transmit an image, you have to first capture it. In this first article of the series, I'll look at the major electronic cameras and scanners designed for the professional.

As I said earlier, it didn't take a genius to realize that digital imaging was the wave of the future. What it does take is money — lots of it.

Even in the world of professional photographers, the price tags will make anyone shutter. The high-end cameras cost more than \$25,000 and professional film scanners will put a \$10,000 dent in your bank account. Talk about sticker shock!

There are low-end models available. The Zapshot from Cannon and Logitech's Fotoman sell for under \$1,000. The results from these systems, however, are more like still frames from a cheap video camera — not even close to what is acceptable to a newspaper.

When it comes to electronic cameras for professional use, there are only two choices — Kodak or Sony.

KODAK DCS (Digital Camera System)

Kodak makes two lines of Digital Cameras — the Professional DCS and the more portable DCS 200.

The professional DCS has six variations. The top-of-the line is the Kodak DC3/32. It provides 32 megabytes of memory and the ability to capture full color images. For the photojournalist, this is the only unit of the professional line that deserves serious consideration.

The Kodak DC3 consists of a Nikon F3 camera cabled to a Digital Storage Unit (DSU) that is carried over the shoulder. The DSU is VERY bulky with a weight of about 12 pounds. The system also includes a Kodak camera back that replaces the standard F3 back and a Kodak camera winder.

The DSU is essentially a portable computer that captures and processes the images and a built-in screen for viewing. It contains a 200-megabyte Winchester drive which allows for storing up to 600 compressed images. Typically, the uncompressed images are about 5.5 megabytes in size - definitely not something you can use with that old AT with a 20-megabyte drive.

The built-in screen allows for immediate viewing of the image. Unfortunately, it is limited to black and white and is only about four inches square. Although small, the image is clear and crisp providing you have the proper lighting conditions. I found it extremely difficult to see the image in bright sun-

light. When working outdoors, choosing an image on the screen was little more than guess work.

The 32 megabytes of memory and winder attached to the camera body make it possible to capture sequences of 24 photos at a rate of 2.5 images per second. Although the DSU is not light, the weight is on the photographer's shoulder. It's also rugged. You could drive nails into the wall with this baby and not lose a shot. The original model was designed so it could be dropped from an airplane. The newer model is not as rugged, but it is also not as heavy.

Connections to the DSU are available through a SCSI 25-pin, female subminiature D connector with standard pin assignments for Macintosh II computers. The unit is shipped with drivers for Photoshop imaging software for the MAC and PhotoStyler software for the PC. Sending an image from the DSC directly (via attached cable) to a MAC or PC (equipped with the proper SCSI controller card) was no problem. Sending an image via modem was another story.

The DC3 has an RS-232 serial port and built-in DIT protocol which allegedly allows for connecting to an Associated Press Picture Desk by Leaf Systems, Inc. A technical representative for Kodak told me that at the time of this writing,



Kodak DC3

the DC3 could not transmit to an AP Picture Desk. According to him, they are waiting for final technical information from the Associated Press and hoping to make it work in the "near future."

Company literature also indicates that the DC3 can connect to a Macintosh via modem. Although there is no mention of it, I made the assumption that a modem connection to a PC was also possible. How wrong I was.

Kodak's technical staff says a connection to a MAC is possible but only if the MAC is running Kodak's proprietary communication software at the time the connection is made. This software is not available for the PC which means a PC connection via modem is not possible.

After receiving a photo from the DC3, the software uncompresses the image and transform it into a format readable by Adobe PhotoShop. This is workable, but it means that you wind-up with a closed system. For Marlboro Racing News, the requirement was for a system with the widest possible connectivity.

The electronic back looks like a roll of film to the Nikon F3 body. Instead of film, the back contains a 1280x1012-pixel resolution CCD array for capturing the image. With this camera and the smaller DCS 200, the camera doesn't even know that the electronics array is attached. This has pluses and minuses.



Taken with Kodak DCS 200

On the plus side, the system uses exposure indexes equivalent to film speeds of ISO 100-1600. On the minus side, the CCD array is smaller than a full 35mm frame (21mm x 16mm or approximately two-thirds the length and width of a 35mm frame). This means you can't use the entire viewfinder. A replacement viewfinder, however, makes the transition easy.

Another result is that any attached lens will have a focal length 2.6 times longer than normal. A 28-mm lens gives the same field of view as about a 70-mm lens. This is great for long distance shooting since the shorter focal length lenses are much smaller and lighter. The disadvantage comes if you need wide-angle shots.

United Press International (UPI) used the Kodak system to transmit instant photos around the world during the recent Presidential Inauguration.

KODAK DCS 200ci

The DCS 200 is the newest of Kodak's digital camera and can be considered the little brother to the DC3. It's built around the Nikon 8008. It's much smaller and considerably cheaper than



The Kodak DCS 200

the DC3. The trade off is that it is quite a bit slower and holds fewer pictures. With a sticker price of just under \$10,000, the DCS 200 has a hard drive attached to the bottom of the camera. Like the DC3, the camera back contains a CCD array and processing unit. The hard drive takes about three seconds to capture and transfer an image from the CCD to the drive. Although much lighter than its big brother, the weight is on the hands, not the shoulder, making it somewhat harder to handle in tight situations.

After taking a picture, there is a noticeable delay while the camera records the image on the disk. To view a captured image, the camera must be attached to a computer. A SCSI cable allows for a connection to a Macintosh or a PC with a Future Domain 1660 SCSI adapter card. Included software allows you to transfer images directly into Adobe PhotoShop on the MAC or Aldus PhotoStyler on the PC.

The DCS 200 uses exposure indexes equivalent to film speeds of ISO 100-400 for black-and-white and 50-200 for color. It delivers resolution of up to 1012x1525-pixels.



Sony Promavica

Image transfer is easy whether you are using a MAC or a PC. In either case, the camera sends a series of thumbnail views to the imaging software. After you select a image, it is imported and expanded in the desired format. Like the DC3, the image size is around five megabytes.

Like the DC3, the DC 200 uses a replacement viewfinder so you can't use Nikon's acclaimed "matrix metering" mode. The attached hard dive holds 50 pictures. An additional drive can be easily attached to the camera for more picture storage. The additional drive weights only about 2 pounds and stores another 50 pictures.

SONY PROMAVICA MVC-7000

The Sony MVC-7000 is actually not a Digital Camera — it is really an electronic or still video camera. Like the Kodak cameras, it does capture the image on CCD elements. The difference is that the captured image is not stored in a digital format but as an analog still video image on a floppy disk (special Mavipak Hi-band disks). Up to 25 images can be stored on a single floppy.

Sony makes several versions of this camera. What makes this one special, and the only one that could be considered for professional use, is that it uses three separate CCD elements. These elements capture red, green and blue information for each pixel separately. Sony claims that this method of capture provides better color over systems, like Kodak, that use an RGB filter over a single CCD array.

Since this is basically a video system, image resolution is dependent on the quality of the monitor and is measured in lines. For example, a portable camcorder or VCR playing through your TV set at home normally delivers about 200-lines of video resolution. Even with the professional quality equipment, resolution is limited to the NTSC standard of 525 lines.

The MVC-7000 can capture and playback images at more than 500 lines of resolution. Translating this into computer term means you can get an image of up to 768x493-pixel resolution. This quality, however, is dependent on connecting to a high-quality video-capture

device. The camera's built-in playback device allows for instant viewing if you have a monitor nearby.

Although this quality is considerably lower than that of the Kodak system, it is good enough in some cases. USA Today and the Toronto Star use the ProMavica in some deadline situations.

All the parts on the MVC-7000, including lenses, are completely proprietary. There are adapters for some Nikon and Canon lenses but you certainly cannot get the flexibility of the full range of Nikon lenses as you can with the Kodak system. The camera is more like a cross between a video camera and a film camera than a conventional 35mm.

Since the imaging area of the CCD chips is smaller than that of 35mm film, the focal length of attached lenses is 5.3 times higher than with a conventional camera. A 75mm lens would have the equivalent field of view of a 387mm lens mounted on a 35mm camera. This factor, coupled with the weight, about six lbs. with a Sony zoom lens attached, makes the MCV-7000 a unlikely candidate for most hand-held shooting, especially if slow exposures are required.

The camera itself has a list price of \$7,500. The lenses are not cheap. An



**Marlboro Racing Team Penske Car - Laguna Seca Raceway.
Sony Promavica Image transferred from camera to Mac to PC.**

8-to-48mm lens sells for about \$1,500. A 7.8-to-78-mm will set you back more than \$4,000. You will also need a monitor to display the pictures, a computer or a special playback unit (\$9,000) and software to capture and manipulate the images. A ten-pack of diskettes will cost you \$105.

If you are looking for a lower priced solution to still video, Sony offers a lower-resolution, single-CCD MVC-2000 priced at just under \$4,000.

Because it uses diskettes, there is no problem with the storage of images. The diskettes can be placed in the playback unit for continuous viewing (the image can be display in rotation similar to a slide projector) or for manipulation (adjustment of contrast, brightness or color enhancement). The images can also be transferred from the playback unit to a computer for more sophisticated manipulation and enhancement.

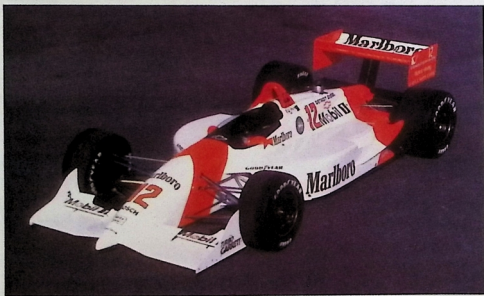
KODAK VS. SONY

Because of the use of a three CCD array, the Sony system delivers better color saturation than the Kodak cameras. The single chip of the Kodak also pro-

duces a slightly mottled effect on large areas of the same color. Because the Kodak produces images that are digital as opposed to the video images of the Sony, the color definition is much sharper. Also, the Sony system tends to produce color bleed especially when two contrasting colors (red and white, for example) are next to one another.

For the professional photojournalist working on deadline, Kodak appears to be the best choice. Although there were compromises involved, we decided that the DCS 200 was the best unit for Marlboro Racing News. Although somewhat slow (1 frame every three seconds) it does produce a full digital image that is easy to download to a MAC or PC. It also offers the advantage of being light and easy to handle.

The DCS 200 is the most cost effective, but not dramatically. After adding all the necessary support equipment, the cost of all the units is about the same. The Kodak DC3 costs about \$26,000 but includes everything you need to capture and transmit the image from the field. Of course, this assumes that you have a Macintosh running Kodak's software package in the office where the images are to be sent.



1993 Marlboro Racing Team Penske car. Photo taken with conventional film camera on transparency film and scanned with Nikon 3510 AF scanner as a TIF image. TIF image (7.7 megabytes in size) was compressed with Jpeg compression by Adobe Photoshop running on a Mac quadra 950 to 240 KB size.

CONTACTS

Eastman Kodak Co.
U.S. Marketing Operations
343 State Street
Rochester, NY 14650
(800) 242-2424
(716) 724-6888

Sony Corp. of America
Electronic Photography
and Publishing
3 Paragon Drive
Montvale, NJ 07645
(201) 368-9272
Fax: (201) 358-4942

Nikon Electronic Imaging
1300 Walt Whitman Road
Melville, NY 11747-3064
(800) 52-NIKON
(516) 547-4355

T/One, Inc.
180 Dublin Court
Petaluma, CA 94952
(707) 778-9282

**Associated Press
Technology Marketing**
50 Rockefeller Plaza
New York, NY 10020
(212) 621-1500

Leaf Systems, Inc.
250 Turnpike Road
Southboro, MA 01772
(508) 460-8300

Adobe Systems, Inc.
1585 Charleston Road
Mountain View, CA 94042
(415) 961-4400

Aldus Corp.
411 First Avenue South
Suite 200
Seattle, WA 98104
(206) 343-3277

By the time you add at least one lens, a playback unit, a monitor, and various cables to the Sony MVC-7000, the overall price is up to more than \$20,000. If you want to do any compression or manipulation before transmitting the images, you will also need to add an addi-

tional \$4,000 to \$5,000 for a computer system.

The actual price of the Kodak DCS 200ci is up around \$19,000 after you add a computer, modem, software and various cables.

ELECTRONIC CAMERAS VS. SCANNERS

Not all newspapers have opted to use electronic cameras for photo transmission. In fact, most are using standard film cameras and then scanning the negatives into a computer. This process has several advantages.

It allows photographers to use equipment with which they are familiar. Most photojournalists have put together a very impressive collection of cameras, lenses and attachments that will get them through any situation. After spending years to build up this stock of equipment, most are very reluctant to make a change.

Also, the vast majority of photojournalists are independents and not actually on the staff of the news organizations for which they work. Spending \$10,000-\$20,000 on new equipment is simply not a possibility for most.

Scanning negatives also produces a much higher resolution electronic image. Typically, a scanned image can yield an electronic photo that has a dpi (dots-per-inch) of 2500-4000. This means better color and an image that can be enlarged to full page without significant loss.

But the story is not all good news. There are trade-offs. The main disadvantage is time. Scanning negatives can take anywhere from five minutes to 20 minutes, depending on the scanner being used and the resolution desired. Add to this the time involved in processing the film and then to import it into an editing program and you have a significant time delay from taking the picture to actually transmitting it.

Typically, it takes 50 minutes to one hour to develop the film and another 10 minutes to scan the negative, or a total

of one hour before you are ready to import the photo into a computer and transmit it.

A high quality, professional scanner costs about \$9,000. The scanner can't even be used unless it is linked to a computer which will set you back anywhere from \$4,000 to \$6,000. This is certainly not what could be considered a cheap solution. With one exception, professional scanners are also anything but portable. This is not something you can carry in your camera bag.

But, everything has its place. A high quality scanner is definitely one piece of equipment that is a must for any news room involved in electronic imaging. Any descent sized newspaper has an extensive photo morgue containing photos that could not be duplicated. As modern papers move into electronic imaging, these photos need to be digitized. If the negatives are available, the only way to do this is by scanning.

Several scanners are available to the professional. Among them two from Nikon, one from Kodak and a complete system, including CPU, monitor, modem and scanner from Leaf Systems, Inc.

NIKON LS-3510 AF

The Nikon scanner works like most any other professional scanner. Basically, light is beamed through the film and is picked up by a sensor on the other side. A unique electric signal is produced according to the amount of light received. The amount of light is regulated by the density of the film. The signal is output by the scanner in digital code which describes each individual scan segment, or pixel, which makes up a completed digital image.

In the Nikon scanner, the light source and reflector screen are fixed. The film is moved between the two. Color images are scanned in three passes, once for each of the primary colors of light (RGB). Black and white film requires only a single pass. The resulting scan is of very high resolution — 3,175 dpi. This is better than most drum scanners which are the standard by which all others are measured. Drum scanners typically have a resolution of 2,000 dpi.

Using 12-bit color differentiation, you get up to 36 bits of color information for each pixel (12 bits for each primary color). What it means is that you will have higher resolution and more color information that most systems can even handle, so high quality imaging is no problem.

The LS-3510 couldn't be easier to use. All you need to do is connect the unit to a MAC via a SCSI cable or PC via a GPIB interface. The actual scanning operation is controlled through the photo-editing software running on the computer. The scanner comes bundled with your choice of PhotoStyler for the PC, Aldus PhotoShop or Fractal ColorStudio for the MAC. The auto focus feature (the "AF" in LS 3510 AF) makes the whole process painless and easy.

According to Nikon, it takes approximately 25 seconds for a prescan. The scan itself takes approximately 30 seconds per color for an 2048x1365 image in high speed mode. If you have high volume, there is an optional auto feeder available which scans 300 slides untended.

The unit is 11.3(W)x14.41(D)x5.86(H) inches and weighs 13.2 lbs.

The Nikon scanner is an excellent choice for any professional application and is used by many of the major news organizations.

KODAK 35mm RAPID FILM SCANNER

The Kodak scanner works basically on the same principles the Nikon. It has automatic color balance and auto focus. Although it does not appear to be as rugged as the Nikon (it has an all plastic exterior cases opposed to the mostly metal case of the Nikon) it seems to be very substantial. The photo editor for the Denver Post says in test they conducted the Kodak was able to take all the abuse they could dish-out without any problems. At nearly 22 lbs., it is also considerably heavier than the Nikon. Its resolution of 1312 X 1024 (approx. 2000 dpi) is also lower than that of the Nikon.

On the plus side, the Kodak scanner is much faster than the Nikon. Kodak

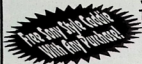
There aren't many things wiser than a Night Owl...

Except maybe TWO Night Owls!



Night Owl's TWO DISK SETS!

7.0 & 8.0
\$29.95 \$49.95
Thousands of 1992 Shareware Files!



\$69.95 Per Set!

The MARkeTplace!



P.O. Box 10925 St. Louis, MO 63135

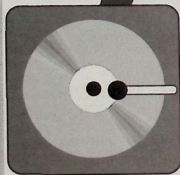


1-800-289-1ROM

International (314) 521-4862
Add \$5.00 for U.S. and Canadian Shipping



**12,500 Software Programs
For Only .005¢ each.**



SOFTWAREVAULT COLLECTION 2 is now available and **TOTALLY NEW**. Over 650 megabytes of DOS and WINDOWS public domain and shareware are loaded on this "just published" edition ranging from business to games.

Our proprietary Librarian, already known as the easiest to use, has been enhanced. The keyword search operates across file descriptions and can take any file from the CD ROM, decompress and transfer it to your hard drive.

COLLECTION 2 also allows you to export new files, by word or phrase. Plus you can build or print directory listings for BBS SysOps.

Consider this incredible value! Suggested retail is \$99.95, introductory price is \$69.95. Distributor inquiries are welcome.

COLLECTION 1 is still available at the special price of \$49.95US.

Call 800 775-4232 or 918 251-7330 to place orders. We accept Visa, MasterCard or Check.

SOFTWAREVAULT

A division of American Databankers Corporation

1820 South Main, Broken Arrow, OK 74012 (800) 775-4232 (918) 251-7330

Multiport



The Intelligent Advantage

Only one BBS allows you to intelligently determine your multi-port needs.

PCBoard/M, the Intelligent Advantage in bulletin board software, now supports many intelligent and non-intelligent serial ports from manufacturers such as DigiBoard, ARNET, Intel, AST and others. As manufacturers introduce new cards a simple driver replacement is all that will be needed to support the new hardware.


PCBoard/M allows you to run multiple ports on a 386 or 486. Intelligent boards such as the ARNET *SmartPort Plus*™ provide 4, 8 or even 16 nodes on a 386 or 486 based computer. PCBoard/M allows you to mix and match any combination of intelligent and non-intelligent cards in the same system — even cards from different vendors.

Best of all, you retain network compatibility and the full versatility that PCBoard has to offer. Hundreds of third-party programs already support PCBoard with many of them offering PCBoard/M compatibility today and many more to come.

The Multiport upgrade for PCBoard is available for all versions of the software supporting 10 nodes or more for only USD \$100. New purchasers and customers upgrading from the /2 (two node) package pay the same low \$100 for PCBoard/M in addition to the new package or version-upgrade price.

For more details about PCBoard and the Multiport version, or to purchase ARNET Intelligent MultiPort hardware, call us today!

Authorized Reseller
ARNET
Multituser Connectivity Solutions

 **PCBoard**
Professional Bulletin Board Software
Clark Development Company, Inc.
P.O. Box 571365, Murray, UT 84157
For Information - (801) 261-1686
For New Orders - 800-356-1686

claims with a Macintosh II and using its proprietary compression file format, it will produce full color compressed images in just 18 seconds. Other file formats supported include Jpeg/DCT, PICT, TIFF or Planar RGB.

The Kodak scanner includes proprietary image-compression software allowing for storage of 300 images on an 80 megabyte hard drive (compression ratio of 15:1). A built-in optical zoom feature allows for image sizing and previewing before doing a full resolution scan. To use it you will need a Macintosh II with at least 5MB or RAM. It is compatible with Adobe PhotoShop, Letraset ColorStudio and other high-end image-editing software.

NIKON COOLSCAN LS-10

The Nikon Coolscan represents a significant break-through in portable scanner technology. Instead of a large, luggable unit, like the Nikon LS-3510 AF or the Kodak Rapid Film Scanner, the LS-10 fits into a size of a 1/2 height disk drive on a PC or MAC. The Coolscan gets its name from the ultra-low power consumption and its low cost, and low heat, light emitting diode (LED) scanning technology. This low power consumption and low heat allows the scanner to operate without problems inside a computer and not overheat.

The LS-10 scans negatives and transparencies in color or black-and-white and captures 24-bit images with a maximum resolution of 2700 dpi. It scans information in a "multi-scan" one-pass mode. Instead of scanning an image three times (once for each color separation - RGB) the LS-10 scans the same line three times in succession so you get all the necessary data in a single pass.

According to Nikon, using an LED for scanning is more reliable than other light-source technologies. The LED strobe illumination system provides the fastest response time (on/off cycles). Also, there are no filaments, tubes or gas and the image is captured in one pass instead of three. With the Coolscan, it takes approximately five minutes for a six to eight megabyte image scan.

The LS-10, however, does not provide auto-focus or an auto-feed option like the LS-3510 AF. I cannot see this scanner being used for heavy usage, but for field use, or even for limited home or office use, this seems to be the one to have.

The Coolscan is available in two models. The internal version (which mounts inside a desktop computer) has a retail cost of \$2,195. The external version which weighs 4.2 lbs. is \$2,415.

ASSOCIATED PRESS LEAF TRANSMITTERS

With the clout of the Associated Press, the AP transmitters, manufactured for the news agency by Leaf Systems, Inc., have become the de-facto standard for the news industry. The Leaf system delivers higher resolution than others, but that is not the reason for its popularity. The main reason is that it is a closed system. With few exceptions, a Leaf system can only talk to another Leaf system. The portable Leafax can only send to a LeafDesk. Since AP has standardized on Leaf for all its transmissions, a major newspaper needs a Leaf system. Recently, AP has softened its rigid approach to compatibility and made interfaces available for the Macintosh.

For field use, Leaf makes the Leafax 35 and the Leafax IIId. The Leafax 35 is smaller and lighter but produces a lower quality photo than the Leafax IIId. Both include everything you need to scan and transmit an image in a portable case.

With both units, the process involved is the same. A negative or 35mm slide is scanned, digitized, with the built-in scanner, and then transmitted with the built-in modem.

With a maximum scanning resolution of 4,000 dpi (6000x6000 resolution over 1.5x1.5 inch area of a negative) the Leafax IIId allows for the highest possible scans of any portable unit. Basic image manipulation (image cropping, toning, contrast and brightness balance) can be done with image viewing on a 5.6 inch LCD color screen (610 x 48 - resolution).

It compresses the images with Jpeg and allows for background transmission during the scanning process. It also transmits in both digital format (using DIT 3.2.Jpeg compression) or analog (using AP AM/FM 144 LPM, CCITT 60 and 120 AM, LPM and UPI AM protocols). Images can be transmitted at speeds of up to 19.2k. Approximately 200 photos can be stored on the internal hard disk. The complete unit, in a single case, weighs 28 lbs.

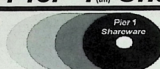
The cost is not for the faint of heart, with a price tag of approximately \$28,000. But that's not all. Since the unit uses proprietary components and software, you will also need to purchase a service contract and pay for regular program upgrades.

The Leafax 35 is smaller but provides a lower quality scan. The maximum resolution is 3000x3000 over 1.5 x 1 inch area of a negative with a dynamic range of only 12-bit color as opposed to 16-bit on the Leaf IIId. It also will transmit only in analog mode and has no internal storage. The cost is approximately \$20,000.

In order to transmit digital images, users of the Leafax 35 need to purchase the Leaf Digital Compander. This unit (weight: seven lbs.) also compresses the images before transmission via the built-in Trailblazer modem. Buying the compander will add another \$10,000 to the cost of the Leafax transmitter/scanner package. Again, you will need to plan on paying for an annual service contract and software upgrades.

The AP Leaf system does deliver the highest quality of any of the portable units, but only at a substantial cost. It bothers me that the units are specifically designed to keep out any form of competition. I made several calls to Leaf System, Inc. and several visits to the Associated Press, both in Los Angeles and to their headquarters in New York. Although the people I spoke with were always extremely polite and friendly, they were unable (or perhaps, unwilling) to give me any usable technical information about their products and how one could connect to

Pier 1[™] Shareware CD-ROM



The **HOTTEST** and most **CURRENT** Shareware CD-ROM on the market! Nearly 6,000 files in 48 different Subjects, and 99.9% dated 1992!

Pier 1 Exchange is proud to present the HOTTEST and most current Shareware CD-ROM ever released. The Pier 1 Shareware CD-ROM will be a series of sequentially updated disks containing the latest shareware programs. Unlike other CD-ROMs that claim to have all 1992 files, Pier 1 Exchange has ensured this with "Smart Data Checking." Dated files (i.e., FILE_ID.DIZ, README, etc.) within archives are disregarded, giving you genuinely current files.

Pier 1 Shareware CD-ROM #1 Features

- 99.9% of the files truly dated 1992 (Smart Data Checking in place)
- Nearly 6,000 files
- 640+ Megs of Shareware files
- Pier 1 retrieval software (easy file access)
- All files are free of viruses (tested with McAfee SCAN)
- Full GAP, PCboard, Spiffire, Wildcat BBS support
- Less than 1% duplication of Night Owl's #7

The cost is only \$59.00 plus \$5.00 for shipping and handling (\$10.00 for overseas orders). We accept check, money order, credit card (MC, VISA or American Express). Checks and Money Orders must be in US funds and drawn on US banks. Make check payable to: Pier 1 Exchange, 128 Carmel Rd., Buffalo, New York 14214



BBS (716)875-3130 16.8 HST Dual Information or FAX (716)875-4931

Free Caddy with order!



ORDER **1-800-438-9734**

30 Day Money Back Guarantee

Subjects

Windows Applications
Windows Games
Programming Languages
Programing Tools
SVGA GIF Pictures
Education Programs
Games / Entertainment
Sound Blaster/MIDI
CTP/Cipart
Bible
Medical/Health
Word Processing
Laser/Printer Utilities
BBS Programs/Doors
Communications
OS/2 Programs/Utilities
And Much More!



The DataPort
Network
Information
System (DNIS)
(619) 864-1468

- 200,000+ files
- 1500+ forums
- 'live' NEWS
- Usenet/Internet

AND MUCH MORE!!!

Log On America **ALWAYS FREE**

USA TODAY, Classified Gif files, Retail Mall, Chat online, Missing Children gif files, and much more, never a charge!!! Win thousands in free computer equipment!!! New winner each month! FULL SUPPORT FOR 8000 BAUD & UNDER

LOG ON TODAY: 401-739-4100

MONEY

With Your Modem

The Monthly Guide for Online Entrepreneurs

MAKE MONEY WITH A BBS!

Alan R. Bechtold, noted online author, publisher, editor and sysop for more than nine years, will SHOW YOU HOW, step-by-step, month after month.

Learn ALL the ins and outs of running a BBS for profit. Find out how to define a personality for your board, latch on to a unique niche in the market, attract callers and make them want to subscribe. Publicize your system without spending a fortune. Put marketing plans and offers to work generating cash on your board. Avoid legal liability. And much more! Whether you already run a board or plan to in the future, **MONEY WITH YOUR MODEM** will increase your cash flow and lower your costs NOW!

30-day MONEY-BACK GUARANTEE!

"Loved the first issue -- the writing, information, even the paper -- don't change a thing!" --- George Matyaszek, Chicago Syslink

"A good idea and a highly informative read." --- Karen Birch, The Invention Factory

"If you offered a lifetime subscription I'd sign up now!" --- Gloria La Hay, The Lambda Zone BBS

More than a newsletter...it's a year-long seminar on making your BBS PAY!

BBS 8125 S.W. 21st Street
Topeka, KS 66615
PRESS 913-478-3157 -- voice
SERVICE, INC. 913-478-9239 -- data

MONEY

A 3-ring binder and DIRECT ONLINE ACCESS to Alan and the other readers!

SAVE \$25!!!

Mention this ad and get 12 issues, a \$150 value, for ...ONLY \$125!!!

NEW!



HI-TECH HOME Weekly

From the publishers of **INFO-MAT** and **ONLINE DIGITAL MUSIC REVIEW**, Top-notch professionally-written news and reviews covering the world of home entertainment, education and utility, including new music, home videos, television, computer hardware and software, CD-ROM, home office and much much more! 48 times per year and ready-to-post on YOUR BBS.

... LESS than \$20 per month!!!

PLUS...

Business Sense Thinking Magazine and Astra Review - FREE!

Also **Micro Sports Collector** - Just \$5/month!

CALL FOR DETAILS!

BBS 8125 S.W. 21st Street
Topeka, KS 66615
PRESS 913-478-3157 (Voice)
SERVICE, INC. 913-478-9239 (Data)
913-478-1180 (FAX)



BOARDWATCH MAGAZINE



1993 READER'S CHOICE BBS CONTEST

Boardwatch Magazine is sponsoring a contest to find the 100 most popular bulletin board systems in North America - and the ONE BBS most popular among callers. The contest will run from January 1, 1993 through July 1, 1993. Winners will be announced at the Online Networking Exposition and BBS Convention (ONE BBSCON) held at the Broadmoor Hotel in Colorado Springs, Colorado, August 26-29, 1993. The Boardwatch 100 list will be published in subsequent issues of Boardwatch Magazine and distributed in electronic form world-wide.

PRIZES FOR BULLETIN BOARD OPERATORS

1ST PRIZE: The BBS system receiving the largest number of valid ballots will be named the most popular BBS. A trophy will be awarded to the top BBS at the Online Networking Exposition and BBS Convention (ONE BBSCON) held August 26-29th, 1993, at the Broadmoor Hotel in Colorado Springs, Colorado. Additionally, the winning BBS will receive air fare, hotel accommodations and registration at ONE BBSCON for the primary BBS operator as the guest of Boardwatch Magazine. Additionally, the system will be featured on the cover of Boardwatch Magazine with an accompanying feature length story about their system and a free full-page black and white advertisement in Boardwatch Magazine for a period of three months.

TOP TEN: The ten most popular bulletin boards selected by the voters will each receive an award trophy at their system in Boardwatch Magazine, inclusion in a special top ten BBS listing in the magazine, and a free quarter-page black and white advertisement in three successive issues. Additionally, they will be listed in the Boardwatch 100 BBS list.

TOP ONE HUNDRED: The 100 bulletin boards receiving the most votes will each be listed in the Boardwatch 100 readers choice BBS list. This list will be published in Boardwatch Magazine and freely distributed electronically on thousands of bulletin boards world-wide.

IN CASE OF TIE: Positions for which an identical number of votes are received will be determined by point value established by the date stamp assigned to each received ballot. Time/Date stamp values are accumulated for all votes and a cumulative score assigned to each BBS based on date of receipt of ballots. Votes receive a date stamp value between 1 and 180 based on the day of the contest the vote is received. System with lowest (earliest) cumulative date stamp score will prevail in event of tie.

PRIZES FOR VOTERS

All valid ballots submitted by voters will be entered in a random sweepstakes drawing. As of the opening date of this contest, prizes include two U.S. Robotics Courier Dual Standard 16.8K Modems, two Hayes OPTIMA 14400 + FAX 144 modems, and two Zyxel U-1496 14,400 bps modems - and more are on the way. A minimum of six valid ballots will be selected from all entries and each will receive a free modem - from the most popular modem manufacturers in the world.

RULES FOR CALLERS

Each voter can vote once, for a single bulletin board system. Each ballot must be fully completed, and individually mailed by each voter. We will verify ballots as necessary. There are three ways to vote:

1. Complete this ballot and mail to: BOARDWATCH MAGAZINE, READERS CHOICE BBS CONTEST, 5970 South Vivian Street, Littleton, CO 80127
2. Complete this ballot and FAX to (303)973-3731.
3. Or, dial the Boardwatch BBS at (303)973-4222 and complete the online ballot provided on the main menu.

Balloting closes at 23:59:59 on June 30, 1993. Last year it ended at midnight on July 1 and caused all manner of grief and confusion so we're cutting a second off of this year's contest.

This contest is not limited to Boardwatch Magazine subscribers, and no purchase of anything is required to participate in this contest. Reasonable facsimile's of this ballot are acceptable, so long as all specified information is included.

We held this contest during 1992 and it generated 11,152 votes by the close of balloting for some 1250 different bulletin boards. The TOP system received about 450 votes. Your individual vote can have a tremendous impact on the outcome of this contest. Further, the odds of winning a modem in last years contest, were 1 in 1394. You won't get those odds in the lottery.

TITLE OF BBS YOU VOTE FOR AS THE BEST: _____

PRIMARY BBS ACCESS TELEPHONE NUMBER: _____

VOTER NAME: _____ VOICE PHONE NUMBER: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____ COUNTRY: _____

PRIMARY COMMUNICATIONS SOFTWARE YOU USE: _____

PRIMARY MODEM MANUFACTURER AND MODEL: _____

HIGHEST SPEED YOUR MODEM SUPPORTS: ☐ 1200bps ☐ 2400bps ☐ 9600bps ☐ 14400bps ☐ 19200bps

DO YOU USE MS WINDOWS (Y/N): _____ DO YOU HAVE A SECOND TELEPHONE LINE FOR USE WITH YOUR MODEM (Y/N): _____

TOTAL CALLS YOU MAKE TO BBS PER MONTH: _____ WHEN DID YOU MAKE YOUR FIRST BBS CALL (MM/YY): _____

AGE: _____ SEX (M/F): _____ PROFESSION: _____

SIGNATURE: _____ DATE: _____

them with another system. Even inquiries made through dealers did not turn up any information.

They seem to have gone to great lengths to select the oddest type of protocols (at least as far as normal communications programs and modems are concerned) they could find and still call them a CCITT "standard." AP and Leaf have also made it extremely difficult, if not in some cases impossible, for any other type of equipment to interface with their units. Even their own equipment is limited when it comes to connectivity. A Leafax, for example can only communicate with an AP Leaf Picture Desk. This is basically a desktop computer bundled with image manipulation software and a Telebit modem. With all the necessary equipment, it will cost an additional \$30,000.

Still, the AP system is the most widely used. The main reason is that, for now, it is the most practical solution for any newspaper that is a part of the Associated Press group — and that is just about every major newspaper in the U.S. The Leaf equipment is of extremely high quality and remarkably reliable. They understand the needs of the press and the problems encountered while working in far-flung locations around the world.

PHOENIX PORTABLE TRANSMITTER

The most serious competition to the AP Leaf system comes from a company called T/One, Inc. makers of the Phoenix Portable Transmitter. Their system, which is compatible with the AP Leafax and Leaf Picture Desk is built around a lunch-box PC running Windows and a Nikon LS-2510AF scanner. Although heavier and bulkier than the Leafax system, the Phoenix system offers a much bigger and clear screen (10.4 inch color TFT flat panel display), a faster CPU and an operating system that is compatible with the AP system and the rest of the world. The company was started and is run by former Associated Press employees, so they fully understand the workings of the competition.

Although their system has advantages over that offered by Leaf, price is not

one. The Phoenix Portable Transmitter will set you back \$26,000. The big plus is that they offer free software upgrades for as long as you own the equipment.

MAKING THE DECISION

So, after months of evaluating and testing, what equipment did we finally decide on for Marlboro Racing News?

After much debate, we decided on the Kodak DC 200ci, color electronic camera. It provides us with the widest range of possibilities with the highest quality currently available for portable digital cameras. Although it requires a computer to acquire and transmit the image, the camera itself is light and easy for the photographer to handle in most situations. The one problem may be with the time delay between capturing images, but this is something that can only be fully assessed during use in actual field conditions over a period of time.

Although scanning does produce a much higher quality, the camera became the clear choice because of our need to meet the deadlines for major newspapers across the US and overseas.

Typically, a race ends at approximately 3:00pm on a Sunday. Most newspapers put their Monday edition to bed around

6:00pm Sunday evening. This only allows a few hours following the race for the processing and transmission of photos. The problems are compounded when you have a race on the West Coast, like the Long Beach Grand Prix, and want to make the deadline for a New York, or East Coast, newspaper.

In the past, the only practical way to meet these deadlines was to transmit a black-and-white photo via the old drum transmitters. These transmitters can also send color separations, but the process is very slow and requires time consuming work by the printer. If the separations are not in exact registration on the press, the result is a photo that looks out of focus.

The goal of Marlboro Racing News is to offer high quality, color photos and still be within the deadlines of most newspapers. The digital camera has made this a possibility for the first time ever. If there is one thing I have learned in more than 20 years as a journalist, is that when you are working in the field, things can and do go wrong. Murphy's Law certainly applies here. So, we needed a back-up system in the event our first line of defense failed.

The answer was the Nikon Coolscan LS-10. It's compact size, relatively low price, and high quality gave us the back-up we needed. In addition, to shooting

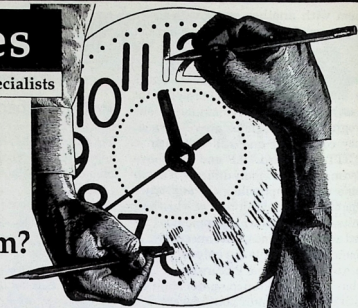


The Associated Press Leaf Transmitter

GW Associates

Communications and Information Systems Specialists

Are You Losing Time Setting Up Your Business On-Line Information System?



INSTALLING COMMERCIAL BBS SYSTEMS IS OUR ONLY BUSINESS

The Only Choice in Telecommunications

GW Associates was formed several years ago to promote and support the growing need for Information Management systems (BBS). Our goal has always been to make communications easier. We've always had the opinion that many seem to work very hard to make "telecommunications" some kind of mystery, a gray area where common man should never wander. And it really can be made simple. We'll be happy to show you how!

Muti-User Environments

Our ONLY business is telecommunications. We install commercial information management systems, we install telecommunications networks linking offices across the country using personal computers and inexpensive automated software. And we sell everything from single line TBBS software to 64 line "plug and play" packages.

Cost Effective

We remotely maintain commercial BBS systems. It's a good bet that you have never hired an employee to be a System Operator. And any time that an employee spends in the design and maintenance of a system is taking time away from the work that employee was hired to do! What happens when the employee is promoted, transfers or resigns? Can you afford to hire and train, or take another employee away from assigned tasks? We can support your TBBS system remotely at what might be a lower cost than what you will pay for an employee benefits package, and we won't demand paid vacations or coffee breaks.

Attention All Programmers

While our main business is the sales and support of TBBS/TDBS systems we find we have all the necessary software in place to market and support any software, regardless of the market it is targeted to. If you have an MS-DOS based software package you would like to market, please give us a call. We know we can help you increase your income, we've been doing it for our associated TBBS/TDBS programmers for years! If you have a "user supported" software package and feel it can do better commercially we would like the opportunity to help you be successful. For more information just call!

Call Today For More Information

If there's anything we can do to help you make better use of any communications tool, please ask. If you're not sure if you really have a need for a system and want to know more, please ask. We're here to help in any way we can. We hope you'll give us the opportunity to help. If you need information on prices or just need information on communications, don't hesitate to ask for help. We enjoy what we do and we'll enjoy discussing your applications and needs.

System Support / Custom Programming

There's a lot available for the TBBS/TDBS System Operator, as well as for anyone interested in an Information System (BBS). If you want to learn more about TBBS/TDBS just call our system and register as a customer. GW Associates offers full support to all System Operators and "we have more than twenty excellent programmers" available to help with your applications and customizing of your system at a very reasonable cost. Please call our system at (508) 429-8385 (N,8,1) and keep up with our new releases or call us on our voice line at (508) 429-6227 if we can help you in any way. Installing and remotely supporting commercial systems is our ONLY business!



Call our Sales and Support BBS for full demonstrations of over 100 TBBS / TDBS add-on application, entertainment and utility programs.

TBBS / TDBS SYSTEM ENHANCEMENT SOFTWARE

QuickSearch

The ultimate in text file search programs, QuickSearch is the ideal tool for any customer or sales support system. QuickSearch is a program that is designed to create an index of over 11,000 text files in up to 99 directories and allow a user to perform a multiple boolean criteria search to find matches in these files and present them for display or download. It sounds simple, and it is! And it is unbelievably fast. This program is a must if you have a need for fast information retrieval. Easy to install and even easier to maintain, it can quickly put an end to repetitive questions from your users.

The Master Series

BoardMaster is the answer to the need for a fast, easy-to-use way to organize and display your message base without using TBBS menus. It allows ONE menu entry, or none at all. It displays up to 999 different message areas/topics with 60 boards displayed on each screen. BoardMaster is fully multi-lingual and color configurable by SysOp and individual users. It has full support for topic boards, Personal Message Groups defined by your users, and many other features to make it easier for your users to access message boards.

PostMaster will handle all your needs for sending mail to users. You create messages that appear very similar to TBBS messages and send to users by a wide range of criteria, including "send to list" capability, without impacting your TBBS message base. It even handles file enclosures. There is no limit to the number of messages that PostMaster will deliver and Individual logs are maintained for each message so you know when messages have been read. Other features include: automatic cutoff; automatic repeat; start delivery on specified date; complete support for ANSI and ASCII users.

Master File Manager (MFM)

MFM is designed to make it as easy as possible for your users to download files from fixed disks and compact discs with as little impact to the system as possible. And with the new network interface MFM adds even more capability and flexibility to this well known and full featured program. Hundreds of TBBS SysOps now use MFM to simply and easily handle all their file download requirements.

Entertainment Software

We have dozens of games and entertainment software available, including the all new The Wild Side (Interactive Adult Adventure), Video Poker, and Chain Links (an addictive word chain puzzle). If you are interested in arcade games, word games, games of chance or adventure games for your TBBS/TDBS system we have them at prices from \$29.95 to \$169.95.

Application and Utility Software

We are the recognized source for excellent TBBS/TDBS application and utility software with over 60 programs in our catalog and more being added every week!

Voice Phone (508) 429-6227 Data Line (508) 429-8385 Fax Line (508) 429-3859

GW Associates P.O. Box 6606 Holliston, MA 01746

eSoft

Authorized Dealer
Sales / Service / Support

© 1992 GW Associates TBBS - TDBS are trademarks of eSoft, Incorporated

with the digital camera, we will also be shooting with a conventional film camera. Although showing its age in the world in breaking news, film still has its place. Magazines still need the high quality that only an original film image can provide and many smaller newspapers are still not equipped to efficiently handle an electronic image.

Both the DC 200 and the Coolscan will be matched with a Macintosh PowerBook 165c, color notebook computer with 160 megabyte hard disk. The images from the camera and/or the scanner are acquired into Aldus PhotoShop before being compressed using Jpeg and transmitted via modem.

Although, I am a confirmed PC user, I decided on the Macintosh because the MAC system is so widely used in the news industry. Most newspapers got into electronic imaging several years ago, at a time when high quality graphics were very limited on the PC platform. At the time, if you wanted to do electronic imaging the only way to do it was on a Macintosh. Over the year, the MAC has become the unofficial standard for the news industry. Like any large organization, the news industry seems reluctant to make any changes even though there are better and cheaper solutions currently available.

We are also adding the Nikon CP-3000 color printer. Using thermal sublimation dye transfer, this printer produces a full color 5x7 inch print that looks and feels just like a glossy photograph. The best part is that it takes only about three minutes for a final print.

The images from the race sites will be sent to the Marlboro Racing News host computer and then made available online for viewing and downloading. In upcoming articles, I will discuss the other aspects of the Marlboro Racing News computer system, including online display of photographs, image editing software, image storage and archiving, and file exchange between different systems.

Electronic imaging for the news industry is still in its infancy, but it is maturing rapidly. Within three years, I believe, film will be a distant memory for all deadline press organizations. Of

MARLBORO RACING NEWS — THE OFFICIAL INDYCAR NEWS SERVICE

Now in its third year, Marlboro Racing News is a computerized service providing complete and up-to-the minute news and information on IndyCar racing. The system is open to qualified journalists and those directly associated staff members from IndyCar and Philip Morris' Marlboro Racing Program provide registered journalists with background information and historical statistics along with the latest news and race coverage. Regional media representatives affiliated with the Marlboro Racing program in California, Colorado, Chicago and New York also supply material to keep the system continually updated.

Designed by journalists for journalists, the main purpose of Marlboro Racing News is to provide timely, accurate information to the media and to assist deadline media in retrieving needed information in the quickest possible manner.

Like any news service, it operates 24-hours-a-day, every day of the year. Of course, the prime usage is during the IndyCar season which runs from late March to October. The 16-race IndyCar season includes events in Australia and Canada as well as such famous U.S. locations as Indianapolis (Indianapolis 500), Long Beach (Toyota Grand Prix of Long Beach), Michigan (Marlboro 500) and Detroit (Detroit Grand Prix).

Among the material found on the system are current race results including qualifying times, boxscores and statistical breakdowns showing current and historical driver earnings, points, wins and poles. Each day during the normal three-day race "weekend" full stories, notes and driver quotes are also available.

Journalists can also find biographies on all drivers, detailed information on individual race tracks, previews of upcoming races and events, and information on IndyCar rules, regulations and history.

Weekly news updates by seasoned and highly respected auto racing journalists are available along with information filed directly by IndyCar teams and sponsors.

New material is filed every day on Marlboro Racing News. The latest addition will be full-color photographs filed from the races. It is the intent that these photographs will be available immediately following, and in some cases during, the current race. Registered users will be able to view the photographic images on-line and/or download the full images for later viewing or publication.

Currently more than 400 journalists in the US and overseas access Marlboro Racing News which is provided at no charge. However, the system is open only to qualified journalists and those directly associated with IndyCar Racing. The system is run like a news service. Its prime intent is to provide timely information for publication in major newspapers and magazines and for broadcast by television and radio stations and networks.

Due to a limitation on the number of incoming lines, it is not possible to provide information to non-journalists and race fans. While fans are the most important part of this or any other sport, it is more efficient to provide them with news and results via major news outlets instead of on an individual basis. The final decision on who will have access to the system is determined by IndyCar officials.

Those who qualify as journalists and who wish to gain access to Marlboro Racing News should contact:

Jim Thompson
Internet: 321-4127@mcimail.com
MCI Mail: 321-4127 or RCN
CompuServe: 77727,2677

course, this assumes that some standards for image formats, compression and transmission are agreed upon. For now, it is a place for pioneers — and it's today's pioneers who will establish the standards for tomorrow.

[Jim Thompson is Managing Editor at Western News Service in Los Angeles, California. He also operates the Philip Morris Racing Information System BBS]

MACINTOSH BBS NEWS

by Bill Gram-Reefer

MACWORLD: THE SEQUEL (COLORIZED VERSION)

Last time we took a look at some of the software announcements coming out of MacWorld Expo. This edition, we take off the rose-colored glasses and examine hardware news of note for sysops.

I'LL GET YOU MY PRETTY, AND YOUR LITTLE DOG, TOO!

Because of the wonderful things it does, Sharp's **Wizard** has finally mutated into a personal digital assistant (PDA) with the announcement of a next-generation hand-held wonder, the **OZ-9600**. And they mean to sign you up, come high Newton or not.

This new version of a product that has been waiting for its market to show up for over four years combines touch-screen pen technology, an "advanced" graphical user interface, an integrated filing system and a variety of personal productivity applications including a calendar, scheduler, user file, anniversary function, to do list, three telephone directories, business card directory(!), outline processor, scrapbook, calculator, home and world clocks, and a secret function to be revealed at a later date. Lions and tigers and bears, oh my.

To prove there's no place like home, you can contact Auntie Em in the storm cellar using the Wizard's modem accessory. When attached, the OZ-9600 can communicate with remote mainframes and personal computers using built-in terminal-mode software that provides both TTY and VT-100 emulation. In terminal mode, the unit can receive electronic mail over most e-mail systems including **Easy Link**, and **MCI Mail**, and can communicate with remote computers, on-line data services such as the Lullaby League's BBS, CompuServe, Dow Jones News, or the Official Airline Guide; and fax machines. An optional wireless adapter allows

Wizard information to be printed on a standard PC printer or transferred to a PC or Macintosh computer using Organizer software, which, being somewhere over the rainbow, is scheduled still to arrive by hot-air balloon in the first half of 1993.

In case you need to hobnob directly with other Wizards, the wireless function uses infrared technology to allow data on the screen or complete files to be bidirectionally transferred between other like units. You'll definitely get the feeling that you're not in Kansas anymore when cable-free data exchange of business cards (sic), handwritten entries and other files, for example, can be exchanged via this wireless link to be shared among gangs of electronic organizers. So if you're in a room and everyone's laughing but you, you're better off to see the Wizard.

To prop up the whole charade, Sharp has also announced that a number of independent software developers, system integrators, and value added resellers have committed to produce applications and market software for the OZ-9600. Developments from these fellow travelers on the yellow-brick road include telecommunications, customized integrated circuit cards, and Macintosh- and PC-based software that will expand the Wizard's vertical market, corporate and consumer applications.

Macintosh developers include Concentrix Technologies (**Connections**, a personal information manager), Power Up Software (**Address Book Plus**), ON Technology (**Meeting Maker**, a calendar/scheduler), and After Hours Software (TouchBASE, a contact database). These new programs, new versions, or modules for existing programs all run on the Mac and can export files that can be uploaded and accessed by the Wizard.

I used to ignore the man behind the curtain. I always thought he would just go away like IBM's PCjr. In fact, there was a time when Sharp used to have kiosks in San Francisco's financial district where they'd try to give away these things, but the guys handing out Benson & Hedges always had better days. If I only had a brain, I might have figured



out why I really need a Wizard; electronic business cards, notwithstanding. But for now, I just want to delay the inevitable obnoxious ad campaign in the major metro dailies. Poppies! Yes, poppies will make them sleep.

Sharp Electronics, The Wizard Division, Sharp Plaza, Mahwah, NJ 07430; (800) 321-8877. After Hours Software, 5900 Sepulveda Blvd., Van Nuys, CA 91411; (818) 780-2220.

Concentrix Technologies, 1875 S. Grant St., #760, San Mateo, CA 94402; (415) 358-5600.

ON Technology, 155 Second Street, Cambridge, MA 02141; (800) 548-8871.

Power Up Software, 2929 Campus Drive, San Mateo, CA 94403; (415) 345-5900.

NUBUS ISDN CARD

Designed and distributed by (get the caps right) EuRoNIS, **Planet-ISDN** is a NuBus board that connects the Macintosh to national and international integrated service digital networks (ISDN). Available in 18 countries, Planet-ISDN is compatible with ISDN-1, the American standard adopted by AT&T, Northern Telecom and Siemens Stromberg-Carlson, and has passed conformance testing in Bellcore labs. Planet-ISDN is also fully compatible with Apple's Communications Toolbox and Telephone Manager. Using Planet-ISDN and connectivity and file transferring software

The product provides a basic rate interface (BRI) of 64 Kbits/sec. on two B channels, plus 16 Kbits/sec. on two D channels, access to digital PBX equipped with BRI outputs, management of ISDN supplementary services including call presentation and identification, subaddress and DID management, user-to-user information, and a BRI bus status control utility. Planet-ISDN supports independent and simultaneous management of the two 64 Kbit/sec. B channels even where one B channel is dedicated to data and the other to voice and other common, everyday telephony functions including video phones and conferencing. Throughput adaption is provided to 56 Kbits/sec. for communications in the U.S. EuroNIS, 25, rue de Jeuners, Paris France 75002; via AppleLink: EURONIS.

EXTERNAL NUBUS EXPANSION FOR MODULAR MACS

Billed as a NuBus expansion chassis for the slow-to-market Duo Docks, Second Wave's **Expense NB4** and **Expense NB8** are external boxes that house four or eight NuBus slots. The chassis attach via a NuBus interface card and cable to a Duo Dock or any modular Mac's NuBus slots. Each version contains its own 50-watt power supply, cooling fan, four- or eight-slot motherboard, and the electrical and mechanical hardware to internally mount a 3.5-inch half-height SCSI device. Notsmall or inexpensive, the **NB4**, which retails for \$1,295, is about the size of a Macintosh **IIx**; while the **NB8**, which lists at \$2,295, is about the size of a **IIvx**.

So if your budget or software forces your BBS to make do with the slots on your single existing CPU, here's an expansion opportunity to consider if you need to make room for more multi-port serial cards. Second Wave, Inc., 9430 Research Blvd., Echelon II, Suite #260, Austin, TX 78759; (512) 343-9661 voice; AppleLink: D0864.

MORE MODEMS

Scheduled to ship in February, Supra announced its **144PB** internal V.32bis faxmodem for Apple's PowerBook. The size of a business card, the new modems utilize Rockwell's new **144ACL**. The **144PB** comes in two flavors. Retail pricing for the plain vanilla version is slated to fall from \$349.95. The **144PB Plus**, which adds voice processing and flash ROM, was scheduled to ship in March and fetch \$ 449.95.

Additional features designed especially for PowerBook users include a hardware wakeup feature that can "hear" the phone ring, then go from sleep to active mode to answer the call. When used with supporting software, the faxmodem can also be set to wakeup at predesignated times to initiate a connection and transmit a fax. FAXStiff, which is bundled with the PB144s, supports the wakeup feature. Also bundled comes **MicroPhone 1.7** and **CompuServe Information Manager**. The voice feature makes the modem into a full-featured communication tool, while the fax feature lets you send software downloads that can update the ROM. **MNP 10** is supported for cellular data transmissions. All the usual protocols are supported, including V.17, V.29, V.27ter fax transmission protocols; with Class 1 and 2 fax software compatibility; and Group 3 fax compatibility.

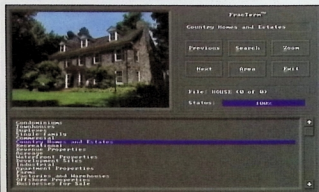
Another optional implementation of this specific Rockwell chipset, and is available from Supra for a price, is a silent answer feature which enables the same phone line for

voice and fax communication. If the modem detects the fax CNG tones, it routes the call to the fax software. Otherwise, if it's your girlfriend calling, the modem sits silently on the phoneline nodding its head as the call is answered by you or your answering machine.

Meanwhile Hayes is shipping its special Macintosh versions of its **OPTIMA 14400 FAX 144 Pocket Edition**, a quite portable 8.5 ounce battery operated faxmodem. V.32bis and V.17 are used for data transmission and Group 3 faxing, respectively. It comes with Mac-to-modem cables, battery pack, wall transformer, a carrying case, as well as Smartcom and Smartcom FAX for the Mac. And, of course, it fully implements Hayes' U.S. patented (# 4,549,302) escape sequence and guard time scheme. \$549 list.

Supra Corporation, 7101 Supra Drive
SW, Albany, OR 97321; (503) 967-2400.
Hayes Microcomputer Products, World
Headquarters, 5835 Peachtree Corners
East, Norcross, GA 30092-3405; (404)
840-9200.

ANNOUNCING REAL TIME GRAPHICS FOR BBS!



Fracterm 1.1 Transfers Color VGA in 4 Seconds!

The secret lies in fractally compressed image files just 5-10K in size. (640X400 24 bit VGA color). Batch Zmodem, multitasking provides continuous images. Not just another pretty interface, **FRACTERM** puts an end to the character based BBS and is the first true image based online catalogue.

- Runs on top of any BBS software – TBBS, PC Board, Wildcat!, Remote Access, etc.
- Three modules provide terminal program, software compression, and a large database.

DEMO: Call (604) 687-1030 USB DS, Log On as FRACTERM

FRACTERM, INC.

604-687-7511



Sysop Special
\$249.95

Inside Out

The Sysop Choice: SupraFAXModem

Inside or Out, now you can choose the hot-selling SupraFAXModem™, technology that best fits your BBS. Either way, Supra can turn your BBS into a communications powerhouse!

Supra's faxmodems offer top-of-the line functionality like 14,400 bps fax and data, compression (V42bis & MNP 2-5), support for Class 1 & 2 fax commands, and compatibility with Group 3 fax machines.

But SupraFAXModems don't stop there. We've enhanced the standard Rockwell modem technology. The revolutionary status display on Supra's external modems makes it easy for you to monitor online activity. The SupraSmart™ UART on the internal V32bis faxmodem significantly enhances the potential for error-free transmissions.

Fall Back/Fall Forward technology lets the modem adjust to changing line conditions. And Adaptive Answer™ recognizes whether an incoming call is fax or data.

The available Caller ID* option can allow positive identification of all callers without the normal tedious logon sequence. Prevent unauthorized entry due to lost or stolen accounts and passwords because the BBS can know exactly who's calling.

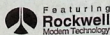
And Supra offers qualified Sysops an "insider" price on both internal and external faxmodems. Choose the faxmodem that's right for you and call Supra's BBS (503-967-2444) or 1-800-727-8772 today for more information.



Supra Corporation®

MODEL	RETAIL PRICE	SYSPON PRICE
SupraFAXModem V32bis external with Caller ID	\$449.95	\$249.95
SupraFAXModem V32bis Internal with Caller ID	\$399.95	\$189.95
SupraFAXModem V32 external	\$299.95	\$199.95

* Adaptive Answer and Caller ID require software support. Caller ID also requires service from the local telephone company.
7101 Supra Drive S.W., Albany, OR 97321 USA • 503-967-2410 • Fax 503-967-2401 • All trademarks belong to their respective companies.



CALLER ID
AVAILABLE NOW



All the News...

all the time!

BOARDWATCH MAGAZINE is pleased to announce the addition of the NEWSBYTES NEWS NETWORK to our stable of text publications distributed to hundreds of bulletin boards and online systems worldwide.

Newsbytes News Network



Known the world over as the pioneers of Electronic Publishing, Newsbytes Magazine has established, and maintained, a reputation for bringing current news of the personal computer industry to over 4.5 million online readers...ON TIME!

A team of 19 reporters contribute news and articles from Bureaus around the world. From San Francisco, Los Angeles, Denver, Washington D.C., Atlanta To Brussels, Moscow, Hongkong and Sydney Australia Updated each Wednesday and Friday.

EASY TO DISPLAY - EASY TO READ....

Each file contains eight component files with permanent file names and each component file contains several stories of that topic. With each edition you can download the .ZIP file, UNZIP it over the current files to update your system.

FEATURES...

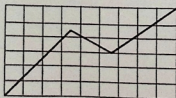
- | | |
|---|---|
| ■ GENERAL.TXT General Computing News | ■ UNIX.TXT Unix News and Events |
| ■ TELECOM.TXT Telecommunications/Online News and Developments | ■ BUSINESS.TXT Business Computing Applications and News |
| ■ IBM .TXT IBM Specific News | ■ TRENDS.TXT Computer Industry Trends and Developments |
| ■ APPLE.TXT Apple Computer/Macintosh News and Events | ■ GOVT.TXT Computer Use In Government |

FREE PREVIEW....NO OBLIGATION!

You may dial our system at (303)973-4222 and view Newsbytes online at no charge and no obligation.

License to display Newsbytes on your BBS system is available at prices beginning at \$25 per month.

Closing New York Stock Exchange Quotes



Over 5700 Closing Stock Quotes From The New York Stock Exchange, The American Stock Exchange and NASDAQ Indexes are Included.

Only \$30 per Month

To Subscribe call Gary Funk at BOARDWATCH MAGAZINE (303)973-6038 VOICE
To See These Services In Action, Call our BOARDWATCH Online Information Service at:

(303) 973-4222 (USR HST 16.K Dual Standard V.32bis)



AQUILA BBS

Chicagoland's Largest System

Since 1988

Aquila has filled the computer screens of Chicagoland for over three years, growing from a single modem line system in 1988 to over 25 lines in 1992. Aquila's success over the years is due to the enthusiastic support of our users. New callers are encouraged to download our current file list and electronic mail conference listing. A short guided tour highlighting our system services is also available for new users. All of our information is automatically mailed to you to read in the comfort of your home or office. So pick up your modem and give us a call! You will find Aquila BBS to be the most valuable bulletin board in your dialer.

Programs - Thousands On-Line

Give your modem a workout! We add new shareware and public domain programs everyday. Over 400 programs are added weekly. With more than 5 Gigabytes of on-line storage, we stock over 50 thousand programs. Aquila makes it easy to find the programs that are important to you, by organizing them into 120+ file directory categories everyday.

We cater to the Windows User

With Windows becoming the most popular user interface around, we make an extra effort to keep you supplied with the latest programs and enhancements by devoting a special conference area just for Windows containing 2000+ files organized into 40+ file directory categories.

Our organization and the latest programs make our file areas the most popular around. These are just a few of our most popular categories available:

Diagnostic Utilities
System Enhancements
File Organizers
Word Processing

Computer Games
Music and Midi Sound Files
Computer Animations
CAD Drawing Utilities

Business - Finance - Tax
Novell and Lan Utilities
Database
Programming

Icons - Icon Managers
Wallpaper - BMP's
Multi-Media Related
Fonts - Font Utilities



The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

New User Information

All first time callers receive by mail, our printed 'New User Information' and 'E-Mail Conference Directory' guide, as well as a 'Quick Command Guide' to help you get the most out of Aquila. The new user information covers system services such as answers to commonly asked questions, USA Today, Boardwatch Magazine, and Electronic Mail off-line readers. The 'Quick Command Guide' is a desktop lookup for using Aquila commands.

Aquila Starter Kit

Callers that are new to modem communications will find The Aquila Starter Kit a great time-saver. Easy for the beginner and helpful for the expert! This \$39.95 kit includes the following:

Procomm (communications program)
Full documentation for all BBS commands
Off-line file browsing program

Our complete file listing on floppy disk
Off-Line E-Mail Reader
Three month basic membership

Around The World E-MAIL Over 450 Conference Topics



We currently echo to and from ILink, RIME, Fido-Net and Throbneth with more to come in the near future. You can get virtually any question answered here and join in on lively discussions with people from across the country and around the world. We also publish our own 'E-Mail Directory' that is sent to all users of Aquila BBS. This directory lists all of our conferences by category and gives a brief description of the topic of each one. Here is a small sampling of over 450 interesting topics that we offer:


General Discussion
Computer Related

Vendor Support
Programming Languages


For-Sale
Current Events



AQUILA BBS
708-820-8344
New User Information



AQUILA BBS
1992
Conference
Directory



Call Today ! - Modem - (708) 820-8344 - Voice - (708) 820-0480



Only One Multi-User BBS Gives You True Freedom.

You started out to build a multi-user BBS. You had dreams about the service your system would provide, the problems you would solve and the money you would make. But you didn't bargain for the pile of hardware you would live with every day and now it controls your life.

As you compared the prices of software you missed the fact that the design philosophy of most BBS software forces many hardware decisions on you. ONLY TBBS allows you to achieve high performance with 64 high speed lines on a single CPU with NO custom hardware. And only TBBS gives you the option of integrated xBASE databasing with the TDBS expansion module and compiler.

True freedom is the ability to spend your time as you wish. Talk to real multi-user BBS sysops. You'll notice that only TBBS operators talk first about ideas, not hardware and software. For over ten years TBBS has provided them the freedom to design custom systems they can live with.

No one gets more capability with less impact on their life than a TBBS sysop. You can buy 64-user TBBS 2.2 for \$1,995 (32-user \$1,495, 16-user \$895, 2-user \$295) and use the money you saved on hardware to celebrate your success. Call 303-699-6565 for more information and access to a demonstration system.





CD Porta-Drive - CD Technology

STORAGE FOR THE AGES

One of the proudest moments any sysop will ever have is when he or she can crow to all of his or her sysop friends that, "Hey—you think that's a boss system, hell, I've got three CD-ROM players online with an additional 3 gigsworth of public-domain files."

So in your wildest dreams, remember to back it up. To help you out in that area, check out LaCie Limited. The company has added an 88 Mb version to its line of removable media hard drives. The drive features SyQuest's new **SQ5110C** mechanism with true interchange capability with 88- and 44-Mb cartridges. According to the company's literature, this new drive can read and write (but not format) existing 44-Mb SyQuest drives. Priced at \$719 and packaged in a zero-footprint case, each drive includes an AC power cable, SCSI cable, instructions, one free 88 Mb cartridge (a \$98 value), and LaCie's Silverlining hard disk management software.

As for CDs, the **CD Porta-Drive** from CD Technology is still a popular choice for sysops to consider. Fast (200 millisecond access time and 330 Kbits/sec. throughput), reliable (50,000 hours meantime between failure—that's close to 6 years), and ready to go (device

driver, caddy, power supply and Mac cables included), the Porta-Drive is also affordable (\$850 list). And the extra added attraction for all of you clean freaks is that the Porta claims "zero contamination" from dust using four hexes against bothersome air-borne debris: external power supply, a garage door, a sealed drive mechanism, and automatic lens cleansing.

Meanwhile, if you really want to hotwire the data throughput from your hard disk, then you'll want to investigate the **SCSI JackHammer** from FWB. The SCSI JackHammer is a RISC-based NuBus accelerator card that supports Fast and 16-bit Wide SCSI-2 hard disk drives which can transfer data at up to, take a breath, 20 Mb per second. These drives should be hitting our streets and wallets during 1993. Priced at \$799 when purchased with one of FWB's Hammer drives and at \$999 when bought separately, the JackHammer supports all brands of SCSI hard drives, ships with a customized version of FWB's **Hard Disk ToolKit** SCSI utility software, and carries a two-year warranty.

Based on the **NCR-53C720**, a RISC-based 40 MHz SCSI processor chip, the JackHammer features 128K of on-board static RAM, direct memory access at 33 Mb per second, and full implementation

of NuBus block transfers. As a NuBus bus-master, the device is able to control activity on the SCSI bus without assistance from the Mac's own CPU. The SCSI port does not disable the Mac's own existing SCSI port, effectively adding support for seven additional SCSI devices. Other advanced features include active termination, universal support for software, command queuing, and software support for duplexing, data striping, read/write caching and turbo-charged DAT backup.

ATTO Technology also offers a Fast (only) SCSI-2 accelerator card, the **SiliconExpress 3D**. The Express supports transfer rates at up to 10 Mb per second, and allows cable lengths of up to 81 feet. Also using a bus-master scheme, the Express frees the host CPU from data transfer chores. The card also allows for true asynchronous I/O support, where multitasking software such as **AppleShare** and **QuickTime** can simultaneously perform disk activity while running applications.

Optional software includes ATTO's **ExpressMirror**, a disk mirroring utility that continuously duplicates every write operation on up to four additional drives; and **ExpressStripe**, which is used to speed data transfer by accessing data from across several drives simultaneously.

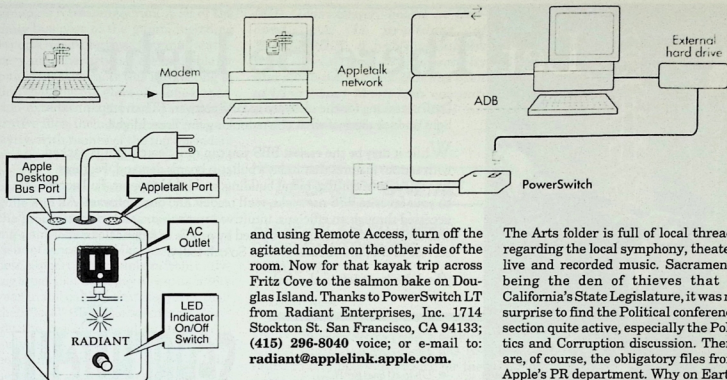
LaCie Limited, 8700 SW Creekside Place, Beaverton, OR 97005; (800) 999-0143.

CD Technology, 766 San Aleso Avenue, Sunnyvale, CA 94086; (408) 752-8500. FWB, Inc., 2040 Polk Street, Suite 215, San Francisco, CA 94109; (415) 474-8055.

ATTO Technology, Inc., 1576 Sweet Home Rd., Amherst, NY 14228; (716) 688-4259.

TURN ME ON, TURN ME OFF

From Radiant Enterprises comes **PowerSwitch LT**, an **AppleTalk** controlled power outlet that can be used to turn your Mac and any AppleTalk-attached peripherals on and off. You can stand there and watch it happen, or you can perform far away feats of conserva-



and using Remote Access, turn off the agitated modem on the other side of the room. Now for that kayak trip across Fritz Cove to the salmon bake on Douglas Island. Thanks to PowerSwitch LT from Radiant Enterprises, Inc. 1714 Stockton St. San Francisco, CA 94133; (415) 296-8040 voice; or e-mail to: radiant@applelink.apple.com.

MAC BBS OF THE MONTH

MacNexus, based in Sacramento CA is an active, broad-based user group with an equally active and diverse BBS. Major areas of the board include the ScratchPad (club business), Classifieds, Hobby echoes including radio, scanners, aviation, electronics, and my favorite conference, Zymurgy. The Humor area includes general jokes and lawyer jokes like, "What do lawyers and sperm have in common? Only 1 in 100,000 have a chance of becoming a human being."

The Arts folder is full of local threads regarding the local symphony, theater, live and recorded music. Sacramento being the den of thieves that is California's State Legislature, it was no surprise to find the Political conference section quite active, especially the Politics and Corruption discussion. There are, of course, the obligatory files from Apple's PR department. Why on Earth any sysop would want to waste disk space to carry Apple's 4th QTR 10-Q report is beyond me. However, on the bright side, I can report that I couldn't find even one Trek-related file; imagine that. There was a Speculative Fiction area, though, full of toothsome Dracula and berserker Saberhagen fans; so don't despair if you can't find 28 very personal reviews of last week's episode of Deep Space Nine.

I was impressed with the apparent openness and lack of autocracy with which the BBS, as an adjunct of the user

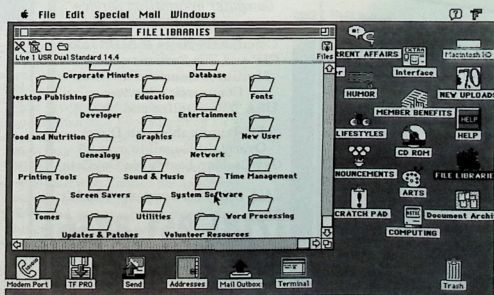
tion using Apple's Remote Access. \$199, list.

Through the Apple Desktop Bus (ADB) connection, the PowerSwitch can be turned on with the Mac's startup key, and turned off when the Mac shuts down. In a networked environment, and about 65% of all Macs are that way, you can use the Chooser to control any PowerSwitch on the network. PowerSwitch supports AppleTalk protocols and works on extended networks and with Remote Access. Users can password protect commands and control both the AC outlet and the Macintosh ADB start-up key.

Let's say you've just finished a morning's rafting trip down the Mendenhall and your beeper tells you to call your housesitter in Albuquerque. Sitter says: "Dude(tte). I see smoke coming out of one of those black modern-things with the funny lights. . ."

"Modem," you correct coolly.
"Whatever. It stinks! I think you want to better do something."

Not wanting to tempt fate, you whip out your cellular-equipped PowerBook, dial your main computer's modem number,





Let There Be Light.

Still searching for the ultimate in BBS software? Then step into the light and see more of what you're looking for: Searchlight.

While it may be the easiest BBS you can run, Searchlight is packed with serious features that today's bulletin boards demand. Features like full-screen editing, menu building, and LAN support. Full access to your favorite BBS networks, mail readers and door software. All accessed through an efficient, intuitive interface you and your users will love. And Searchlight is backed by people as fanatical about service as they are about software. So call today.

And don't get left in the dark.

- Create your own menus!
- Unlimited multinode capacity
- Up to 10 lines per PC
- Intelligent Digiboard™ support
- LAN compatible
- High performance multitasking with Windows, DESQview or OS/2



SEARCHLIGHT

Voice Info/Orders: (800) 780-LITE

Support BBS: (516) 689-2566

Warning!

**Meeting Friendly Users
May Be Caused by
Entering THIS BBS !**



*America's Largest Gay & Lesbian
Computer Information Service
and Resource*

Community News & AIDS Info
GIF and File Sections - Profiles
Multiuser Games - Hot Chat
Commercial Services
USA Today Online and MORE!

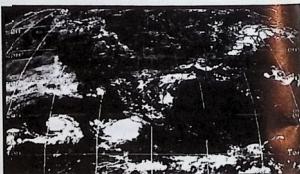
PC-Pursuitable with Direct
Overnight E-mail to over 25
Gay/Lesbian boards via GayCom

CALL with your computer TODAY!

(718) 951-8256

You must be 18 or older
300/1200/2400/9600/14.4k baud 8,N,1

1412 Avenue M, Suite 2517, Brooklyn, NY 11230



Centrally Located on Planet Earth

Online since 1982, Nautilus Commercial Data now offers 250,000 public domain files and 200 incoming lines. We support 38,400 baud throughput, with 14,400 baud CCITT V.42bis compatibility. Our corporate fileserver supports 28 Gigabytes of on-line storage, complete with HOURLY U.S. and WORLD News updates, and multiple daily Satellite Weather Images of Earth. (No charge to examine system!) With THOUSANDS of GIF images, dBASE files, 1-2-3 Templates, Word Processors, Clip Art, Telecom packages, and GAMES, we're your 1-Stop Get-It-All-Here system.

- VISA/MC/OPTIMA/AMEX Accepted -

Data: (316) 365-7631

(8,N,1 - IBM/ANSI/Color Supported)

Nautilus Commercial Data System

P.O. Box #645 / Jola, KS 66149

Voice Mail/FAX: (316) 365-7559



group, is refreshingly run. A lot of the daily business of the group, including reports regarding costs for group stationery and other artwork are available for public inspection. It was interesting to find that this full glare of public inspection extended to the board's administrative files, including quarterly log activity, with names of the top uploaders and freeloaders in view for all. It could be you, Claire Poe. Finally, I was charmed by the absence of touchy-feely guile and power trippiness with which the group's board presented it's growing-pain letter to the group. One key issue of concern for MacNexus is how to best support local members from outlying areas that must pay upwards of \$60/year in toll calls to the telco just to call their "local" BBS. The board is considering the cost of upgrading its lines to include those callers and has faithfully polled its members in what can only be described as a desire to serve.

MacNexus is operated by Sacramento Macintosh User Group. It has 5 lines running at 14.4 Kbps or higher and runs 24 hours per day. Full access to all the files is limited to members only. MacNexus dues are \$30 per year. Dues include 12 monthly newsletters, access to the groups' 24-bit scanner, digital camera, BBS, and special user group promotions. MacNexus, P.O. Box 163058 Sacramento, CA 95816-9058; (916) 455-4MAC (voice) (916) 455-3726 (BBS) 1:203/933 (FidoNet).

ATTENTION MAC SYSOPS

If you have a Macintosh-based BBS (even if it isn't GUI), let us know who you are and what you think you're doing that makes your board special. To make things easy for everyone, mail a diskette containing your user program with a preset account, time allotment (1-hr for editorial deadbeats like me should be plenty) and password to the address below so I can log on and take a look around your system. Also include a textfile that describes your board and any interesting places on it you think are special. I'll try to visit as many boards as possible and write about the most interesting ones I can find. MAC BBS, 2069 Highland Drive, Concord, CA 94520.

[Bill Gram-Reefer, based in Concord, CA, is president of WORLDVIEW, a public relations firm specializing in connectivity and communications. Bill has been writing about Macintosh computers since 1984. E-mail Bill at: wh05156@worldlink.com]

LEGALLY ONLINE

STEVE JACKSON GAMES DECISION STOPS THE INSANITY!

by Lance Rose

The lawsuit by Steve Jackson Games against the U.S. government has resulted in an important victory for the rights of BBS sysops and users. On March 12, 1993, federal judge Sam Sparks held that government agents can't just grab a computer bulletin board and rifle through it looking for evidence of crimes. They must respect the privacy rights of all system users. If there is publishing or journalistic activity on the system, the government must also recognize and respect that there is legal protection for those activities.

The Steve Jackson Games (sometimes referred to here as "SJG") decision comes none too soon. Over the past few years we have seen bulletin boards seized right and left under any half-baked pretext that came in handy, and the pace is accelerating. Years before the SJG raid, Tom Tcimpidis had his BBS seized because a credit card number was illegally posted on his system by a user while Tom was on vacation. The Alcor cryogenics folks had their BBS seized when cops were searching for a missing human head (maybe they heard there was a head in the hard drive). Others have had their BBS' seized in connection with claimed phone system hacking, pedophilia, copyright infringement, and pornography, among other things. The latest seizures galvanizing the BBS and computer network community are the seizure of several BBS' by U.S. Customs agents in Operation Longarm, directed at domestic down-

loads of supposed child pornography from three BBS' in Denmark, and the FBI's seizure of Rusty and Edie's, a 100+ line BBS, on suspicion of software copyright infringement. The modus operandi of the various government agencies getting in on the BBS seizure game is fairly consistent: seize first, ask questions later.

The police and other government agents have a legitimate need to investigate such matters. They are charged with protecting us from harm, even at some risk to their own lives. If a computer running a BBS was no more than a fancy calculator, its seizure by the authorities would fail to budge the most sensitive eyebrow. But BBS' are in fact far, far more than that. They are nerve centers for burgeoning new forms of social activity, involving millions of people in the U.S. alone. When you take the computer running my BBS, you also swipe a complete set of keyholes through which can be seen the private lives of its many users; you board up a meeting place and psychic watering hole attended daily and nightly by dozens, hundreds, or thousands seeking company, cheer or solace; you close down a state-of-the-art publishing and distribution center that dwarfs the publishing capabilities of its ancient cousin, the printing press, at a fraction of the cost.

The facts leading to the Steve Jackson Games case have been described frequently in the BBS literature, and a



Software & HARDWARE

We ARE the SOURCE for the BBS INDUSTRY!

Featuring...

This Month's Advertised Specials!

Wildcat!	Single line BBS	99.00
Wildcat!	1-10 Lines BBS	199.00
OLBJ	Online Blackjack Door	19.00
OLHM	Online Hangman Door	25.00
TBBS 2.2	2 Line BBS	219.00
Searchlight	1 - 10 Line BBS	299.00
Call our BBS for Latest Door Releases...		

Call Today For Latest Product Information and Download our Complete Catalog!

- Wildcat! ▪ TBBS ▪ TDBS ▪ DigiBoard
- U.S. Robotics ▪ The Major BBS ▪ CD-Discs
- BBS Technologies Doors ▪ Searchlight



BBS Technologies

Inquiries (209) 222-0733

BBS (209) 222-0227

1444 E. Brown Ave Fresno, Ca. 93704

FREE-ACCESS 24 HOURS A DAY / MODEM (310) 372-4050

L.A. ONLINE

Our shopping mall is national!

New! New! New!

SIERRA DIRECT

The LOWEST PRICES on SIERRA games anywhere! On-line ordering. Type GO SIERRA

BOOKS ON TAPE

GREAT FOR COMMUTERS! THOUSANDS OF SELECTIONS Type GO BOT.

NOTEWORTHY MUSIC

OVER 10,000 CD's to choose from! Fast Search. Low Prices. Type GO CD from any prompt

COFFEE ANYONE?

Excellent Values on a wide selection of coffees and gourmet items. Type GO COFFEE

OTHER FAVORITES...

MOVIES & EVENTS

Movie Times, Reviews and event calendars for the greater Los Angeles... Extensive! Type GO MOVIES.

THE NEWS ROOM

Articles, Classifieds, and events from L.A.'s largest weekly. Includes "Pasadena Weekly", Easy Reader, and Santa Monica Life.

WINE ON-LINE

Information on over 250 California Wineries and a store that sells wine by the case ...FOR HUGE SAVINGS! Call for details. TYPE GO WINE.

DATE-A-BASE

THE OFFICIAL singles club of LA Online. Includes real photos and background profiles. Membership fees apply! Call for details.

ON-LINE PHARMACY

Over 1,000 items for sale. Discounts on drug prescriptions too. Type GO RX.

GET THE PICTURE!

With our "HOT" new Graphics Software you can pull up pictures with text. Available in stores, on-line or by phone.

CALL TODAY!

No charge to the caller
MODEM: 310-372-4050
VOICE: 310-372-9364



NATIONAL ACCOUNTS AND RETAILERS WELCOME

17 Nodes

Register Online

OS2 • DOS • Windows

Graphic Images

Internet • Usenet

Rime • ILink Email

(408) 655-1096 2400 bps

(408) 655-8294 v.32bis

(408) 655-8297 USR HST

Online Games

326 CONFERENCES

report on the trial was presented in last month's Boardwatch, so the background will be only briefly recounted here. Three or four years ago, a collection of Secret Service agents and telephone company security officials chased across the country after youthful "hackers" they believed had stolen some data on Bell South's 911 emergency system, the "911 Document". They justified their pursuit outwardly on the basis of estimates placing the value of the document near \$80,000. However, during the trial of one of the supposed hackers it eventually became public that the true value of the document was closer to \$14.00 - the price charged by the phone company if you ordered the information directly from them. So it turned out the financial damage from swiping the 911 document was substantially less than would be caused by a couple of neighborhood thieves sneaking an old black-and-white TV set out of an apartment in the projects. Hardly the kind of thing that normally stimulates the expenditure of great masses of public money on expensive federal agents. As the dust settled, the escapades surrounding the 911 Document, including the nationwide crackdown on hackers in 1990 known as Operation Sundevil, stood nakedly revealed as a bunch of old guys with badges playing cops and robbers with teenagers, without any major crimes to blame on the wayward lads. Nonetheless, the cops got a good bit of prosecutorial mileage out of the 911 Document before it finally sank out of sight.

The trail of the 911 document led, among other places, to Lloyd Blankenship in Austin, Texas, who ran the "Phoenix" bulletin board as a suspected "hacker" haven. By the time the cops went to investigate Phoenix, it had been shut down. The trail was not quite cold, however. They found out Blankenship had a day job at Steve Jackson Games, and that he was a co-sypop of the SJG customer support bulletin board. SJG was, and still is, one of the country's leading producers of role-playing adventure games.

Since Blankenship was a sypop of the SJG bulletin board just like he had been sypop of Phoenix, the cops figured SJG must be harboring all of the evil "hacker" material they imagined they would have

found on the Phoenix system. From this exceedingly slender thread they dangled a request to a federal magistrate for a search warrant for the SJG BBS, and somehow they got it. They promptly barged into SJG's offices and took every computer they could find, including one lying in pieces on a bench.

Despite repeated protestations from Steve Jackson and his employees that SJG really was in the game-making business just like it appeared, the government kept the seized computers for many months. Just after the seizure SJG informed the government that it used its computers for various publishing activities, and that its BBS computer contained the private e-mail of many different people. This apparently made little difference to the cops.

After widely publicizing its absurd plight and gaining the interest and support of the Electronic Frontier Foundation and other groups, Steve Jackson Games sued the U.S. government in the federal district court in Austin, Texas for wrongfully raiding its offices and seizing its computer equipment. The thrust of the suit was that the computers in SJG's offices were entitled by law to special protection from government search and seizure for two separate reasons: first, because the BBS computer contained the private e-mail of its many users, and second, because SJG used its computer equipment as part of a publishing operation. The e-mail privacy rights were protected mainly by the federal Electronic Communications Privacy Act, or "ECPA"; the publishing protection was created by the federal Privacy Protection Act, or "PPA". Each of these laws creates special requirements which the government must meet before it can search or seize private or publishing-related materials. In a landmark decision, SJG won its case against the government on both privacy and publishing-related grounds, establishing that federal agents must follow the requirements of the ECPA and PPA when seeking materials contained in BBS', and that the government would be liable if they fail to do so.

In his written opinion, Judge Sparks first addressed SJG's claim that the government violated the Privacy Pro-

tection Act when it seized SJG's computer equipment. The PPA is designed to promote freedom of the press. It protects materials being prepared or maintained for publication from government seizure, except where the government believes the publisher or journalist himself was involved in a crime, and that the materials sought relate to that crime.

The judge found that the Secret Service agents literally had no idea that SJG was involved in any kind of publishing activity when they obtained the search warrant and took SJG's computers. Within a couple of days, though, they were fully on notice that SJG was deeply involved in publishing on several fronts, all of which involved SJG's computers: SJG's own game books, such as the GURPS Cyberpunk volume still in development on the computer system at the time it was seized; articles for magazines and newsletters; and materials made available to callers to SJG's computer bulletin board. By this time, the agents were obligated to give all the seized computers and files back to SJG to minimize their disruption of SJG's publishing activities. Instead, they held on to the computer equipment for several more months before returning it.

Judge Sparks held that the agents' unjustified retention of the computer equipment was a clear violation of the PPA, entitling SJG to monetary damages for all resulting losses to its business. The judge awarded SJG a total of \$51,040 on this claim. This was far less than sought by SJG, but the judge was so unimpressed by the testimony of SJG's accountant on actual losses that he threw it all out. Oddly, the judge accepted the government's contention that SJG achieved national notoriety as a result of the improper seizure, which actually ended up helping its business. Perhaps SJG should count itself lucky the judge saw fit to award it any damages at all.

Next up was SJG's claim that the government "intercepted" BBS user's private e-mail when it confiscated SJG's bulletin board system and read through its contents, thus violating the anti-interception provisions of the ECPA. In the case's major sour note, the judge

Your Application Online in Days

Realize the benefits of online services, without allocation of dedicated resources, major investment, or delay. Save time, money, and resources with The Business BBS!

A Classic Service Bureau

The Business BBS will set-up, operate, and maintain your online service on our equipment, at our facility.

We custom design menus, fax response, databases, and other services to meet your specific business needs. We'll even handle your custom billing requirements. You control information content, service features, and user access... with complete security.

Ease of use is assured, even for customers new to online services. And, they won't get busy signals!



An Applications Integrator

Have The Business BBS create your custom online applications. Eliminate the learning curve and confusion of applications development.

Efficient, easy to use applications are built to meet your business and customer needs.

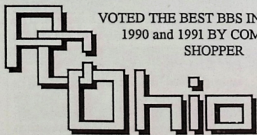
The Business BBS gets your application built, tested, and online in days... whether you plan to operate it in-house or on our equipment.

The Business BBS

Voice Modem Fax
(310) 477-0593 • (310) 477-0408 • (310) 477-9475
2531 Sawtelle Blvd., #109, Los Angeles, CA 90064-3163

PC-Ohio PCBoard

The Best BBS in America



VOTED THE BEST BBS IN AMERICA
1990 and 1991 BY COMPUTER
SHOPPER

- | | |
|--------------------|------------------------------|
| • 50 Nodes | • 2400/9600/14400/16800 BPS |
| • 350 Doors | • All Nodes USRobotics HST |
| • 100,000 Files | • Dual Standard 16800 Modems |
| • 15 Gigabytes | • V.32 V.32bis |
| • 400 Directories | • V.42 V.42bis |
| • 2500 Conferences | • MNP5 |

We are members of RIME, Smartnet, U'NI-net, RFnet, Racenet, Sportnet, Fidonet, Biznet, Chucklenet, Intelec, Friendsnet, Harenet, NAnet, Ilink, City2City, Annex, BASICnet, Byte Brothers, Execnet, Sourcenet, After Dark, Throbnnet, 18+ and Internet (pcohio.com).

(216) 381-3320

HIGH SPEED I/O CARDS & NS16550AFN's

Having high speed modem problems, loss of connection when multi tasking, or just looking for a way to speed up your transfers?

Dual Serial, Socketed Communications Card-

Including (2) 16450 (stock chip).....\$16.50

Dual Serial, Parallel, Socketed Communications Card-

Including upper IRQ's & 2 16450 (Stock Chip).....\$24.50

NS16550AFN (High Speed Chip)-

(Replaces Stock Chip).....\$10.00 each

Many other PC components available, along with complete systems - call today for lowest prices!

FREE!
Prodigy with
every order!
(While supplies last)

MATRON

P.O. BOX 195123
WINTER SPRINGS, FL 32719

☎ (800) 453-3205

denied this claim, citing to an earlier case declaring that an "interception" does not occur when government agents listen to voice conversations recorded on a cassette tape.

This part of the ruling is a real head-scratcher. If any of the e-mail on the seized BBS was undelivered to the addressees at the time of the raid, the Judge Sparks' analogy to a conversation recorded on a cassette does not hold. A voice conversation on cassette is complete; there's nothing to intercept, the discussion's over. In contrast, an undelivered e-mail message is either a response to a prior message from another e-mail sender, a message seeking a reply, or both. It is a discussion still in progress. Grabbing the latest message in this discussion is clearly "intercepting" it, and fits easily within the ECPA's statutory coverage.

Fortunately, SJG had another e-mail privacy claim under the ECPA. SJG asserted that by reading the e-mail on its BBS, the agents also violated a section of the ECPA securing privacy for "stored electronic communications" (as opposed to intercepting messages in transit). Government agents can not legally read private electronic messages unless they believe they are "relevant to a legitimate law enforcement inquiry." Judge Sparks found the Secret Service had no such belief. They just dragged the BBS back to their office and browsed through it for interesting stuff. Even more outrageously, the government kept the search warrant sealed for several months after the raid, so that SJG's lawyers could not attack it in court during that period. This gave the agents all the time they wanted to mull over the private e-mail of the BBS users at their leisure, without interference from the victims of their illegal conduct.

The judge got this second ECPA claim right, holding that the government violated the privacy rights of Steve Jackson Games and of four individual e-mail users who had joined the suit on SJG's side. In his words, "the Secret Service in this case virtually eliminated the safeguards contained in the statute." He awarded all the plaintiffs the statutory amount of \$1000 each, but denied any additional compensation. Such a small

amount hardly stings the government's wallet. It is little more than a symbolic slap on the wrist for the agents' atrocious intrusion into the private lives of BBS users. On the bright side, the judge's readiness to award all e-mail plaintiffs \$1000 per head implies that class action suits may work quite well in future struggles against BBS seizures. If all the e-mail users of the Steve Jackson Games BBS had sued as a class, the total damage award against the Government at \$1000 a head could have added up to real money.

In all, not a bad few months' work by Steve Jackson Games and its attorneys. They pried loose from the government a total of \$56,040.00 in compensation plus all attorneys' fees (the latter amount can easily exceed the compensation damages in a lawsuit of this scope). More importantly for the rest of us, they established that two different federal statutes can be used to protect BBS' against government excess, even though neither the ECPA nor the PPA was enacted specifically for the benefit of BBS'. This is an important cornerstone in the work of securing dependable freedom from government interference in the future development of BBS' and the computer network community.

Though the results in the SJG case were very good on balance, a couple of major BBS legal issues were left for better resolution on another day. One is the judge's failure to find an "interception" of e-mail by the Secret Service, based on his mistaken analogy of a not-yet-received BBS message to a completed past conversation recorded on cassette tape. This mistake must and shall be corrected at some point, either in another court or in explanatory legislation. Another is the finding that SJG was a "publisher" for purposes of the PPA. This holding was good and correct, but it leaves the applicability of the PPA largely undetermined for other BBS'. Steve Jackson Games was a print publisher, and its computers were used to support the print publishing operation. What about BBS' that publish their information in electronic form only? What about BBS' that do not publish anything themselves in the traditional sense, but host public conferences? The SJG case simply does not give guidance

on when a non-printing BBS qualifies as a publisher or journalistic operation for purposes of PPA protection.

One theme that surfaces frequently in Judge Sparks' 27-page opinion is the government's "I Dunno Defense". According to the government's attorneys, the Secret Service agents who made off with SJG's computers were just too confused to do it right. All that newfangled technology, all those complicated federal procedural laws - how could they know there were any limits on their ability to take people's property? But they meant well, so let's excuse all their blunders and conveniently forget the harm their bumbling worked on innocent citizens.

The I Dunno Defense works best with judges who feel a bit befuddled by the new technology and new statutes themselves. Look at it from the judge's point of view. If he has a hard time figuring out BBS' as a new social phenomenon, how can he possibly expect the law enforcement folks to understand the stuff any better? In an ideal world, the I Dunno Defense would be swiftly slapped down as the disrespectful, condescending ruse it is. Unfortunately, it worked sufficiently well for the government to avoid the real pasting it deserved in this case.

I Dunno Defense #1 was that the Secret Service agents did not know about the Privacy Protection Act when they first requested a warrant to take the SJG equipment. What kind of excuse is that? If ignorance of legal limits is officially accepted as a valid excuse for the government to overstep its authority, then we officially have no real protection against the government at all. I Dunno Defense #2: at the time of the raid, the agents had no idea that SJG used the seized computer equipment for publishing. Under this theory, government agents are supposedly incapable of imagining that a computer bulletin board might be involved in "publishing" of any sort. These very same agents doubtless use information published by a plethora of online information services regularly to investigate every kind of suspect and situation. Yet it never crossed their minds that the computers and online information service run by

After Hours BBS



"Home Of The Unfriendly Texans"

20 Lines of Chat,
Games, Files
and Fun!

(512) 448-3562 :2400 bps

(512) 707-3167 :14.4 bps

BBS

The Best Little Warehouse
in Texas!

ATTENTION SYSOPS !

Start turning those file bases into cash. Scanners, looking to make more for your efforts then just subscription rates?

Ever consider making a CD-ROM?

You can start out with selling as little as 33 discs, paying off your ENTIRE investment and looking forward to **\$3.350 PLUS PROFIT !!!**

We are a full fledge service bureau committed to putting out the highest quality discs possible.

And if you've looked around you'll be happy to see that we specialize in ADULT material. We guarantee confidentiality, and most of all RESPECT!

Just Compare...

25 Year Disc Warranty

ISO-9660 Industry Standard
Full Compatibility

Up to 6 Color Silkscreen

10 Day to Same Day Turn
Around Time

Also if you require any hardware such as: MS-DOS systems, DigiBoards, Amiga systems, Mass Storage, scanners, etc.

Ask to speak with a representative of our parent company, Elite Micro Computers.

E-COMM

Voice: 908-541-4214

Fax: 908-541-6348

Elite Communications
P.O. Box 38
Port Reading, NJ 07064-38

TurBoard

The WORLD'S 1st
naplps bbs

Features:

NAPLPS/ANSI/ASCII
FIDONET
QWK
CD-ROM
MULTINODE
MOUSE

ALL MAJOR DOOR FORMATS

SUPPORT

Built-In Doors:

CLASSIFIEDS
CB-CHAT
QUESTIONNAIRES
BBS LIST
ART GALLERY
BOOKS
"YAK" (INTELLIGENT INTERACTIVE ENGINE)

pricing

1-2 NODES \$75.00
3-5 NODES \$150.00
6-15 NODES \$500.00
15+ NODES (coll)

Software © Work
P.O. Box 566491
Atlanta, GA 31156

404/395-6525 voice

404/395-6327 data - 14.4k bps v.32bis, v.42bis / 16.8k bps HST

404/395-6326 data - 2400 bps

MasterCard, VISA or money order

FOR SALE

Established Online service
with national
market/clientele...
PROFITABLE!

Optimal sole proprietor
situation. Relocate anywhere
in the U.S.

Turnkey Operation.
Current owner retiring, but
will train/consult

\$150,000, terms negotiable

C.A., Inc.

74 Madrone Ave.
San Anselmo, Ca 94960

☠ BANNED on ChatLink! ☠

THE GaRBaGe DuMP goes "National"

CAUTION



ADULTS
AT PLAY®

- ☺ Adult Realtime Chat
- ✉ Private E-mail
- ✉ Adult Message Areas
- ✉ National Net Mail
- ☺ "Let's Get Personal"
- ☺ PC-Catalog
- ☺ Dating Registry
- ☺ ASP File Library
- ☺ Multi-Player Games



Nationwide Local Access - Low as \$2/Hr

505-294-5675

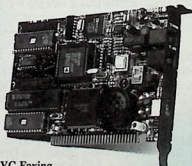
2400
8N1

To find your Local Access Number Online
505-294-4980 Voice Support Hot-Line

The GaRBaGe DuMP is a trademark of DataSafe Publications, Inc.

ChatLink! is a trademark of OWDS Inc.

Our V.32bis Scout is Trustworthy.



A Scout is trustworthy.

Digicom Systems proudly introduces the most trusting kind of high-speed modems, the Scout Series. Our Adaptive Rate feature ensures that each connection is at the fastest and most reliable speed.

Data throughput up to 57,600 bps.

Fully compliant with CCITT standards, the Scout and ScoutPlus feature CCITT V.42bis, MNP 5 data compression for data throughput up to 57,600 bps.

WYSIWYG Faxing.

The ScoutPlus combines V.32bis 14,400 bps data and send and receive CCITT Group 3 fax with Delrina's WinFax Lite and DosFax Lite software. The Scout is a fully V.32 compliant 9600 bps data modem.

The Scout Series includes supporting data software, an introductory CompuServe membership and a 5-year warranty.

Digicom Systems incorporates award-winning engineering, service and support in every product.

Bundled with
Delrina's WinFax Lite
and DosFax Lite software!

Features

	Scout	ScoutPlus
CCITT V.32bis (14,400 bps)	✓	✓
CCITT V.32 (9600 bps)	✓	✓
CCITT V.22bis (2400 bps)	✓	✓
CCITT Group 3 send/receive fax	✓	✓
CCITT V.42bis / MNP 5	✓	✓
CCITT V.42 / MNP 2, 3 and 4	✓	✓
Internal half-card w/16550 UART	✓	✓
External	✓	✓
Data communications software	Qmodem	
Warranty	5 years	

**Call 1-800-833-8900
for more information**

Digicom Systems, Inc.
188 Topaz Street
Milpitas • CA 95035



© 1992 Digicom Systems, Inc. Scout and ScoutPlus are trademarks of Digicom Systems, Inc. All other product names and company names are trademarks of their respective companies.



Free CD-ROM Disc!

Demo and Test contains 350 megs of PC Shareware & PD software. Including Special CD-ROM Benchmark & Test Utilities written by our programming staff, and NOT available on any other CD-ROM Discs. Our Special Test Utilities measure throughput as well as access times in a reliable and consistent manner for a meaningful real-world benchmark for CD drives. The Disc and Interface Software are fully functional (even for BBS use) and not crippled in any way. When purchased separately Mega Demo & Test is \$14.00 plus \$6.00 for S&H - However for a Limited Time Only this Demo and Test CD-ROM Disc is Free with any CD Disc purchase.

So what's different about PROFIT PRESS's CD-ROM Discs ... Besides Interface Software that'll Blow Your Socks Off?

All of the archive files have been read and indexed by our hypertext search engine which creates a file on the CD-ROM Disc that allows for searches on unique words and phrases. This means that the user can search the entire disc in less than 10 seconds and the search will include ALL of the documentation INSIDE the archive files. For DOS and Windows 3.1 users we provide both MegaSearch and MegaWin our Graphical Search and Retrieval Software that allows the user to view 256 Color GIF's, Animated Color Fil's, play SOUND BLASTER Sound Files, plus view and search for text strings INSIDE the archive files, all with just one keystroke or mouse click.

All of our CD-ROM Discs are "BBS Ready" and include files.bbs, plus MegaDoor and MegaTerminal. Both programs fully support the hypersearch lookup features of MegaSearch. MegaTerminal is our "Remote BBS Graphical User Interface" for MegaDoor that allows the remote user to access MegaDoor using... Mouseable Pull-Down Menus in a Windowed Environment! Try MegaTerminal! It's unlike anything seen before on public BBS systems. You Have to See it to Believe it. Call our BBS at (602) 299-0693 or at (602) 577-6969. Select Doors from the main menu, run door #1, enter 1 to download MegaTerminal, unzip, read the short document megaterm.doc, install as instructed and experience MegaTerminal!

Mega
CD-ROM 2
PC Shareware Spectacular

650 Megs Over 7,000 Virus Free Files - 1 plus Gigabytes Uncompressed! Contains Sound files, 256 Color GIF's, FLI's, Utilities, Programming, Bibles, True Type Fonts, WINDOWS Programs, Electronic Magazines, Communications, BBS Programs, Plus Much More! - 65% different or newer files than Mega CD-ROM 1

Mega
WinOS/2A
Windows and OS/2 Shareware

600 Plus Megabytes Over 4,861 Virus Free Files - 1 plus Gigabytes Uncompressed! Filled With Windows and OS/2 Shareware and Public Domain Files Including Sound files, Utilities, Programming, Plus Much More!

Mega
A/V 1
PC Audio / Visual

Over 600 Megabytes Filled With Hundreds of 256 Color .Gif's, .FlI's of all types & Includes our New "Zoom-In Catalog System" with our Built In .Gif Viewer, plus Loads of Sound files, .Mod., .Rol., .Wav, & .Voc, + Utilities for Sounds & Graphics!

New
Release!

fao
Gold

For Adults Only GOLD - Just The Best of the Best - Many .Gif's are New and NOT Included on FAO 123 *.Gif's with No BBS Logos! Over 600 Megabytes "Wife Proof Labels" 256 Color .Gif's with resolutions up to 1280x1024, 256 Color Animated FLI's, GL's, .DIs, Games, and ASCII Fantasy Text Files. We have also included our New "Zoom-In Catalog System" with our Built In .Gif Viewer, plus The FAO Series is the Only Adult CD-ROM Discs with MegaDoor and MegaTerminal plus a True MS Windows 3.1 User Interface!

**Special
Introductory
Price Only!**

New
Release!

\$39.00 ea.

Red Hot!
Super
Special!

fao

For Adults Only
3 Disc Collection

For Adults Only "Wife Proof Labels" 256 color GIF's, with resolutions up to 1280x1024, 256 Color Animated FLI's, GL's, .DIs, Games, and ASCII Fantasy Text Files. - This Huge 3 Disc Collection Contains 1,892 Megabytes with Over (Count Them) 16,180 Files!

Now, for a Limited Time Only!
**Get all 3 of these fantastic
FAO CD-ROM Discs for Only!**

\$69.00

Mega
CD-ROM 1
PC Shareware Spectacular

650 Megs 8,036 Files. Over 1plus Gigabytes Uncompressed! Contains Sound files, 256 Color GIF's, FLI's, Utilities, Programming, Bibles, True Type Fonts, WINDOWS Programs, Electronic Magazines, Communications, BBS Programs and Utilities, Plus Much Much More! Contains Many Files Intentionally NOT Included on Mega CD-ROM 2 - Mastered 1/92

**Special Offer
Supplies Limited!**
\$19.00 ea.

SDN 1
600
Megabytes
Plus

A Must Have for Everyone not just Sysops! - 600 plus Megabytes! Over 7,215 Files. Includes the SDN complete Library, SDN International is the largest not for profit author direct file distribution network in the world. Also included is WinNet - Windows Library, DVNet - DescView Library, LanNet - Lan Library, DDS - Door Distribution System Library, SDS - Sysop Library, Digital Gamers Review Online Magazine, Boardwatch Magazine's Online Edition, FIDONet News, ASP Shareware, Genealogy, Cooking, Games, Graphics, and Utilities! of all types, Plus Much Much More! - Mastered 6/92

**Special Offer
Supplies Limited!**
\$29.00 ea.

SONY Caddies \$4.75 ea. with Non Demo CD Purchase - Questions & Dealer Info. Call (602) 577-9696

All prices are quoted in U.S. dollars, with funds drawn on U.S. banks. The prices listed above do not include shipping and handling.

PROFIT PRESS, 2956 N. Campbell Ave., Tucson, AZ 85719
INFORMATION (602) 577-9696 - FAX (602) 577-9624



**ORDERS ONLY! Call Toll Free
1-800-843-7990**

Wildcat!

GOLD

RELEASE III

The Optical BBS

the Digital Publishing Company
8100 Wayzata Boulevard
Golden Valley, MN 55426 U.S.A.

612-595-0801
612-595-0802 FAX/BBS

In the USA Call;

1-800-279-6099



DIGI BOARDS™

PC/8 - \$415* • PC/8e - \$535* • PC16 - \$920*
DB25 cables • Diagnostic kit \$65 • Daisy Chainer FREE

(We sell every DigiBoard™ product available — call or FAX for quote)

VISA•MC•COD CASH! *PLUS SHIPPING OF YOUR CHOICE

BRAD THEISSEN

1-800-821-5456 • 1-800-624-1954 FAX

SERVING THE BBS INDUSTRY NATIONWIDE

GRAFIX

Adult computer images

You won't believe your eyes

Adult computer pictures hot enough to melt your modem

Discover the world's best source for adult computer pictures. Try Grafix. We offer easy local access via PC Pursuit from 500+ cities. Call today.

XXX Rated & Super Low Cost

Log On: 516/689-2853 • Up to 14,400 baud

the Funhouse

804 442-5867

Original Software
Original Printer Art
Original Conferences
Original GIFS
Original Sounds
Original FUN!!

The most ORIGINAL BBS in the WORLD!

Call America's best music
and general purpose
BBS!

25,000+ shareware files
150+ music bulletins
USA TODAY Online
Multiple phone lines
300+ conferences in the
RIME & MIDILINK networks, Online
Digital Music Review, GIFs, MIDI files,
soundcard files, concert news, video news,
international music charts & much more!



PO Box 81684
Atlanta, GA 30368

All 900 callers get immediate access! All baud rates are supported. Private lines are available to subscribers. Call the Music Connection BBS today!

CALL 1-900-370-1994

First minute free, .95 each additional minute. Must be 18 years old or have parental permission to call.

**YOU
TOO
COULD
HAVE
THIS...**

CYBERSTORE

ONLINE INFORMATION SYSTEMS

• USA Today
• Newsbytes
• Boardwatch
• West Coast Music Review
• CyberSurvey
• the Biz Dir
and much more...

**Want a GRAPHICAL BBS?
WE HAVE ALL YOU NEED FOR
COCONET SOFTWARE**

VOICE: (604) 526-3373 FAX: (604) 526-0607

#320 - 720 SIXTH STREET
NEW WESTMINSTER, BC
CANADA V3L 3C5

(604) 526-3676 (8n1)



NEW BBS!



**Men for Men
FREE! FREE! FREE!**

**No Membership Rates
Dial into America's Hottest Gay BBS!**



Features

- LIVE One-on-One
- Mega Party Action
- Sizzling GIFS
- No Membership Hassle
- Instant Access

The Modem Men

1-515-FUNN-MEN

Must Be Over 18

**Subscribe
To**

BOARDWATCH

Online

**Call Today
(303) 973-6038**

Own A Pay BBS?

We Can Help Make Your System Pay!

CONNECT 900 SERVICE!

Now your Customers can pay for your services INSTANTLY! You can offer them a 900 number without the huge investment! We provide everything: the 900 number, all equipment, and powerful specialized software for your BBS. No more hassling with Checks or Credit Card Numbers. Simply give your Customers the BBS System ID Number that we assign you and the 900 Number to call. The system is totally Voice Automated and completely separate from your BBS! We take care of everything! Your Customers simply call the Voice 900 Number and enter your System ID. They receive a Redemption Code that is entered into your BBS. The entire call to the 900 number takes less than 1 minute! Your Customers receive Instant Access under the terms you specify! Each month you will receive a check for the codes redeemed on your system. Here are just a few of the advanced features of this service:

- Easy to Use
- No Extra Phone Lines Needed
- Keep the Same BBS Pricing
- Voice Automated System
- Low Setup Cost
- BBS Specific Redemption Codes
- Easy Setup
- Fast & Easy Payment
- Totally Configurable BBS Software
- Detailed Help Information for Your Customers
- No Hidden Costs
- Detailed Monthly Reports

C900

MAKE IT EASY FOR YOUR CUSTOMERS TO PURCHASE TIME AND/OR SERVICES ON YOUR BBS.
SIGN UP TODAY FOR THE CONNECT 900 SERVICE!

CALL NOW!

800-453-9250

CORBIN 22, LTD

3721 S Westridge St Suite 222 St Kalamazoo, MI 49008
BBS: (616) 343-1246 2 Voice: (616) 372-4628

PRIME

PreRapture International Message Exchange

"The sun never sets on the PRIME NETWORK"
America, Europe, Asia

The only worldwide
Christian Network on Earth!

Featuring Wholesome Echoes
and Files for Christians
and
those not Religiously Inclined

Support for Home Schooling
and Education.

FREE BIBLE to Download
or USE ONLINE

(919) 286-3606

(919) 286-3266

(919) 286-3962

Using USRobotics DHST MODEMS
on All Lines. A Non-Profit Organization
with NO CHARGE for BBS Access
or Membership

PREHISTORIC PRICES

Call America's BBS Specialists And Save!

Software:

**COCONET
DOORWAY
THE MAJOR BBS
ORACOMM
QMODEM
SEARCHLIGHT
TBBS & TDBS
WILDCAT! BBS
XCHANGE**

Hardware:

**DIGIBOARD
HAYES
INTEL
PRACTICAL
TELEBIT
US ROBOTICS**

Call For Others...

Toll-Free Order Line

800•488•9831



Customer Service &
Technical Support

313•477•0067

TELESAURUS™

TM & © 1992 Telesaurus Corporation, 21832 Green Hill, Farmington Hills, MI 48335-4310

great **BBS** software

lets you get...

creative
Enter **RyBBS**

with features like:

- ⇒ Installs in Under 5 min.
- ⇒ Unlimited Ext. Protocols
- ⇒ Unlimited Menus
- ⇒ QWK Mail available
- ⇒ Unlimited Doors
- ⇒ FIDO Support

\$ 75.00 single node*

\$175.00 multi node*

*Includes bound manual

30 day Money Back

Guarantee!

Call: (714) 681-6210

Ryan
RyBBS
Bulletin Board System

Data: (414) 962-1097
PO Box 11134 Shorewood WI 53211

Steve Jackson Games might do some sort of publishing?

Judge Sparks accepted both of these I Dunno Defenses when he refused to find that the initial seizure of SJG's equipment by the Secret Service was improper under the PPA: "The Court does not find from a preponderance of the evidence that the admitted errors in Foley's affidavit were intentional and so material to make the affidavit and issuance of the warrant legally improper. . . The affidavit and warrant preparation were simply sloppy and not carefully done." Wow! Under established law, when warrants are sought to search businesses protected by the First Amendment, government agents and courts are supposed to be especially careful! Sloppy searches are simply illegal. Moreover, if the agents had kept their slop in check and looked into whether SJG was engaged in publishing, they might not even have seized the computers in the first place. The judge's decision on this point is flat wrong. The answer to wrongful searches is not to excuse gross blunders by uninformed agents, but to slap those agents down hard enough to give the government a real incentive to educate itself far better on how to protect us all.

To Judge Sparks' credit, at least he refused to accept the same government excuse for the Secret Service's undue retention of SJG's equipment after the initial seizure. When the agents became fully informed about SJG's publishing operations within a day or two after the seizure, they became obligated to back up the information they needed for their investigation and return the computers unscathed to Steve Jackson Games. The judge also showed superior judgment when faced with the government's truly astounding I Dunno Defense #3: in this variation, the government claimed that even though the Secret Service agents were aware of the special warrant requirements of the Electronic Communications Privacy Act (as well they should be, since it is the entire basis for their involvement in the computer crime business in the first place) and failed to mention these requirements to the magistrate when requesting the warrant, the resulting improper warrant and seizure should

still be excused because they relied on that warrant in "good faith". The judge mercifully dispensed with that circular argument with forehead-slapping swiftness.

The government's shameless deployment of the I Dunno Defense and Judge Sparks' partial acceptance of that defense to temper his findings of government misfeasance confirm the need for a simple defensive strategy recently devised by Steve Jackson himself: the use of warning labels on all computers and related equipment in any place where a BBS is running. The basic label should boldly and expressly warn government agents that the computer equipment is used for publishing, private messages, and as a public meeting place. It should also mention the basic laws governing search warrants for BBS' - the Electronic Communications Privacy Act, the Privacy Protection Act, and that old standby the Bill of Rights. Slap the labels on your equipment, then photograph the equipment with the labels on it to retain proof that labels are indeed on the equipment. You never know what might happen after it's hauled back to the raiding agent's office. The government's use of ignorance to avoid its legal limits will be sharply curtailed if BBS owners display clear references to all the pertinent legal limits on governmental search and seizure emblazoned on their boxes.

The Steve Jackson Games case is only a trial court decision, giving it limited authority with other courts, and it may yet be appealed. Even so, the decision is a key event in the development of BBS law, and shows that it is going in the right direction. It is one of only two major court decisions to date on major issues of BBS law. The other was *Cubby v. CompuServe*, discussed in these pages in the past, which recognized 1st Amendment limits on a sysop's duty to monitor message traffic. Happily, both the SJG case and the *Cubby* case were decided in a way that expands the acknowledged legal protection for BBS'. We have not yet seen any clunkers setting back the cause for BBS legal protection, and hopefully we'll continue to be spared the displeasure.

The SJG case also shows that BBS privacy rights against the government piggyback on the privacy rights of individual BBS users, in much the same way as the BBS First Amendment rights recognized in the *Cubby* case piggybacked on the free speech rights of individual users. The sysop still wields power over who may use his BBS, but the fundamental relationship between sysop and BBS user is not like that of landlord and tenant; it's symbiotic. The still-common practice among sysops of denying users any privacy on the BBS is revealed more clearly than ever as a mistake. Now, denying user privacy no longer merely shows lack of respect for users' affairs. It actively removes the BBS' strongest defense against government seizure under the Electronic Communications Privacy Act, by removing the user privacy rights on which that protection is based.

The user privacy point has an additional complication. While we need genuine privacy of user messages for strong ECPA protection against search and seizure, the SJG case shows it is also important to identify the users affected by a raid in order to successfully pursue the ECPA claim. Only identified e-mail users were awarded damages by the Judge Sparks, even though many other BBS users were affected. Ironically, assuring maximum privacy protection under the ECPA means that user e-mail should be kept private on the BBS, but all users should be identified at least to the sysop, so their injuries can be counted for increasing the penalty against the government in the event of an improper raid.

Without taking away from the SJG victory, there is a final disturbing aspect to the case, reaching back to the essential nature of what lawyers call our "adversarial system of justice". The legal game in the U.S. allows the parties to a lawsuit to take entirely opposed positions, tell completely conflicting stories and deny any shred of validity in the other party's view. The government heartily played this game to the hilt in defending itself against Steve Jackson Games, denying in every possible way that U.S. civil rights laws protect computer bulletin boards or their users.

Luckily for us all, the government lost. But why didn't the government just admit it made a big mistake in raiding Steve Jackson Games, and go back to chasing its "hacker" playmates? Why was it so important for the government to try and justify its grossly improper and entirely mistaken intrusion into Steve Jackson Games' business?

Some might guess the government was craftily playing devil's advocate, trying to help create protective case law for BBS' by raising anti-civil-rights positions just so they would be refuted decisively by the judge. Such a possibility is highly unlikely. Going into the trial there was a very real chance Judge Sparks could have found the government's raid entirely justified, and left Steve Jackson Games without a remedy. We must assume the government lawyers meant what they said when they argued that the PPA and ECPA did not protect BBS', and that even if they do, a raid violating those laws will not be improper if the agents had no idea that BBS' have special legal protections. There's a

serious attitude problem on the part of the people employed by our government to protect us. Hopefully, the lawyers for our U.S. government will carefully read and learn from the judge's opinion in the case they just lost against Steve Jackson Games, and properly instruct their field agents and magistrates about the rights of those who run BBS' and those who use them.

[Lance Rose is an attorney practicing high-tech, computer and intellectual property law in Montclair New Jersey, and is available on the Internet at elrose@ucll.sf.ca.us and on CompuServe at 72230,2044. He works with shareware publishers, software authors, system operators, technology buyers, interactive media developers, on-line database services and others in the high technology area. He is also author of the book SYSLAW, a legal guide for bulletin board system operators, available from PC Information Group (800)321-8285. - Editor]

DIRECT DIAL

SFNET - COIN OPERATED BULLETIN BOARD INVADES COFFEE HOUSE CULTURE

After a career as a produce distributor, general contractor, and real estate salesman, Wayne Gregori had yet to find his place in the world. He did dabble in computer consulting, and so encountered the world of bulletin boards. In 1990, he started an interesting, but unprofitable BBS called the Compact Disk Exchange in San Francisco. The system allowed callers to swap and trade Compact Audio Discs and did gain some popularity. But the procedures to transfer funds and discs were awkward, and the system evolved to become lots of work and little cash flow.

In the summer of 1991, Gregori hit on a different approach to make operating a bulletin board profitable. He designed and built a coin-operated terminal and placed it in a San Francisco coffee house. Today, he operates SFNet, a 30 line

Plug into the Internet!

HoloNet links you to the **Internet** - the world's largest and fastest growing interactive network. To have *full* access to the **Internet**, all you need is a modem and HoloNet membership.

The **Internet** puts a wealth of information and services at your fingertips for your business and personal needs -- Send electronic mail to businesses and other Internet users with Internet E-Mail. Transfer and download files from other computers on the Internet using Internet FTP. Talk to people all over the world with Internet Relay Chat. Play games with people across the country with Internet Chess, Go and MUDs.

The **Internet** is a valuable source for information and worldwide communications. **HoloNet** provides easy access to the Internet.

HoloNet is a local call in over 850 cities nationwide. Try it for yourself and find out what the **Internet** is all about.

For a **free** demo modem to
510-704-1058 (8N1)



HoloNetSM
From Information Access Technologies, Inc.

HoloNet is a servicemark of Information Access Technologies, Inc. • 46 Shattuck Square, Suite 11 • Berkeley, CA 94704 • voice 510-704-0150 • © 1993 Information Access Technologies, Inc.

TBBS system offering a mix of features to callers in the San Francisco area, including patrons of some 18 coffee houses.

San Francisco features dozens of coffee houses offering pastries, gingerbread, cappuccino, coffee, and latte of industrial strength. Patrons use the coffee houses to meet, relax, and often just to read a book and have a cup of coffee. The culture vaguely resembles the coffee house culture of the late 'sixties, with poetry, occasional musical performances on a small scale, and a general underground feel. Today's culture includes "slackers" - young people who have basically avoided the rigors of school and work, working just enough to survive on the edge of society, and hanging out.

Gregori designed a reasonably vandal-proof terminal table constructed largely of plywood painted with Zolotone - a fibrous paint mixture used to coat the interior of automobile



SFNet - BBS in a Kitchen

trunks. The table serves admirably as a coffee house table, but features a monochrome monitor shining directly up through a glass inset set in the center of the table. An ordinary PC keyboard, covered with a "keyboard condom" plastic shield is mounted on the edge of the table. A coin box allows coffee house habitués to swap quarters for time.

The terminal, which Gregori has termed an "RJ11 Table", consists of a power supply, a very smallish XT motherboard with two serial ports, a 3.5-inch floppy drive, the monochrome monitor, and a modem. The coin box is connected to one serial port while a modem is connected to the other. A specially written terminal program monitors the coin box and keeps the time meter internally, while allowing users to connect to the SFNet BBS. The device resembles nothing so much as the old PAC-MAN tables that became common in bars and nightclubs in the mid-eighties.

Users can view an information file about SFNet, a

help file on how to use it, and by putting in a couple of quarters, logon to the BBS without any technical knowledge or even the telephone number. Additional time can be purchased in quarter increments essentially the equivalent of about \$3 per hour.

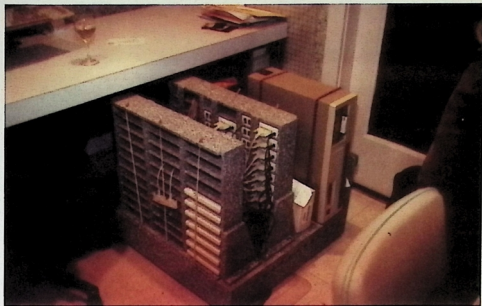
The system automatically dials the SFNet BBS and each table has its own dedicated port on the BBS. After an incident where hackers wardialed to determine the telephone numbers of these ports, Gregori, and his programming assistant Dave Lahti, modified the proprietary terminal software so that it did a little handshake between the table and the BBS before allowing access.

The system features a number of message conferences covering politics, social issues, and so forth, an Internet mail function, and some interactive games like Chat Chess and Chat Poker. Indeed, the multiline chat function seems to be the most popular activity among the coffee house crowd - though many do maintain personal mail boxes on the system. With the Internet mail function, people who do not even own a computer can receive and send e-mail world wide - for the price of a quarter - from a local coffee house.

And there are plenty to choose from. Gregori has persuaded some 18 coffee



Wayne Gregori with RJ-11 Table at The Club - a San Francisco Coffee House



SFNet - Coin Operated BBS

houses in the area to feature his table. Basically, they get a free piece of furniture perfectly suitable for knocking on a bran muffin with double latte, along with 10 to 15% of the monthly haul of quarters. According to Gregori, some of the less active sites generate as little as \$150 per month, while the better spots generate as much as \$600 monthly. Gregori supplies the telephone line necessary to connect the table.

Since we have a bit of a weakness for coffee anyway, we visited several of these clubs during a recent visit to San Francisco. We found the coffee a bit strong for our tastes, but the RJ11 tables in more or less constant use. Curiously, one of the main features of all of these coffee houses is a conventional cork bulletin board on the wall - plastered with layers of notices for roommates wanted, places to rent wanted, various music and poetry festivals and events. One of the side effects of the RJ11 tables is that at any given time in the evening, as many as 18 people in coffee houses are actually talking to each other via this multiline chat network. They can be as anonymous, or as intimate as they wish. And if they do decide they want to meet, they can usually travel over to the other coffee house to consummate the face-to-face portion of the meeting.

The BBS itself is located in a very pleasant house on Noe street in San

Francisco where Gregori lives with his wife, Jill, and two sons Ben, age two, and Devin, age four. The BBS is actually in their kitchen. And this has to be one of the neatest BBS installations we've seen. Two monitors and keyboards occupy a counter at one end of the kitchen. The PC and all the modems are held in a rollout box Gregori designed that has RJ-11 jacks, serial port connectors, power supplies, etc. all on a unified rack mounted on wheels. The unit sits under the counter, but slides out easily for main-

tenance.

The system uses eSoft's TBBS software, and the entire rack is filled with US Robotics Sportster 2400 bps modems. File downloading doesn't seem to be a big draw on the system, with most of the usage given to mail conferences, Internet mail, and chat. Gregori does have one dedicated V.32bis port for those using offline QWK mail readers. Table manufacture occurs in a room over the garage.

Aside from the 18 lines for the RJ11 Tables, the system does sport an additional 12 lines for a regular clientele of people dialing from home. They access the system at a modest \$7 per month. The primary access number is (415)824-8747 but there are local access numbers in South San Francisco, Sausalito, Burlingame, San Leandro, and Oakland.

SFNet is innovative in several ways, but most notably in that it brings the activity and culture of bulletin boards to a group that wouldn't ordinarily encounter it. With coffee as high as \$4 a cup, the 50 cents needed to access the system doesn't seem too high a price to pay. Coffee house patrons are drawn to the activity of the BBS callers, and BBS callers likewise seem attracted to a BBS with users scat-



An Early Model Terminal at Muddy Waters Coffee House

USA BBS



**THE BIGGEST BBS
IN ARKANSAS!**

**MORE THAN
10.2
GIGABYTES!
16 LINES
--- all v.32bis!**

Many Online Games -- Multiple Message Areas -- Conference Areas
Online Magazines -- Online Store
Special Areas including Business, Adult, Religion & Kids
Monthly Contests including **FREE v.32bis Modems** and **MORE!**

Call 501-753-8575 for a FREE Preview!

(U.S.A. BBS in El Dorado, AR -- 501-863-0311)



INSTANT online registration with major credit cards.



HoloUUCP is compatible with:
FirstClass • Major BBS
PC Board • Waffle

Give Your BBS the Internet Advantage!

HoloUUCP connects your BBS to Internet E-Mail and USENET News. With Internet E-mail you can exchange mail with people all over the world. Internet E-Mail reaches over 11 million mailboxes, including major commercial services like CompuServe and America Online.

HoloUUCP lets you set up your BBS system to automatically exchange mail whenever you want. Mail sent to sites directly connected to the Internet takes only minutes.

HoloUUCP also links your BBS to USENET News. USENET News is used by people all over the world to discuss over 4,000 topics. Topics range from arts & sciences to recreation & politics and more. HoloNet can help you expand your BBS membership by giving your users access to the news conferences they want. Over 40MB of new articles are available daily.

HoloDNS is an option you can have with HoloUUCP. HoloDNS provides a custom Internet address for your BBS. For example, your members would have an address like "first.last@your-BBS.com". The one time setup fee for HoloDNS is \$25.00.

HoloUUCP service is quick and easy to set up. To take advantage of HoloUUCP you'll need a UUCP gateway. The one time setup fee for a HoloUUCP account is \$50.00 and usage is billed at regular HoloNet rates, which are as low as \$6.00 per month.

For more information on HoloUUCP, please call us at 510-704-0160.



HoloNet®
From Information Access Technologies, Inc.

Information Access Technologies, Inc.
46 Shattuck Square Suite 11
Berkeley, CA 94704-1152

CompuServe, America Online, FirstClass, Major BBS, PC Board and Waffle are trademarks of their respective owners.

© 1993 Information Access Technologies, Inc. All Rights Reserved.

SFNET COFFEE HOUSE LOCATIONS

Brain Wash	1122 Folsom St., San Francisco	(415)861-3663
Horseshoe Cafe	566 Haight St., San Francisco	(415)826-8852
Ground Zero	783 Haight St., San Francisco	(415)861-1985
Club Coffee	920 Valencia St. San Francisco	(415)821-7112
The Coffee Zone	1409 Haight St. San Francisco	(415)863-2443
Muddy Waters	521 Valencia St. San Francisco	(415)863-8006
Jammin Java	701 Cole St. San Francisco	(415)668-5282
Jammin Java	9th & Judah. San Francisco	(415)566-5282
Laundry Cafe	570 Green St. San Francisco	(415)989-6745
Caffe Roma	526 Columbus Ave. San Francisco	(415)296-7662
Monday Blu's	3821 18th St. San Francisco	(415)255-7556
Cafe Nefeli	1854 Euclid St. Berkeley	(510)841-6374
Cafe Milano	2522 Bancroft Way Berkeley	(510)644-3100
Espresso Roma	College / Ashby Berkeley	(510)644-3773
Coffee Source	2404 Telegraph Berkeley	(510)844-3045
Central Park Books	32 E. Fourth St. San Mateo	(415)579-4900
Royal Ground	Corner 4th/B St. S. Rafael	(415)455-0107
Mama's Royal Cafe	387 Miller Ave. Mill Valley	(415)388-3261

tered among San Francisco's coffee houses. They do seem to be two distinctly different groups.

Gregori also plans on extending the concept to other cities. He views it as a community building project and this

summer he intends to manufacture the RJ11 tables and sell them to BBS operators around the country at about \$2600 each. We here from BBS operators with this type of concept continually, but all seem stymied by the lack of availability of a rugged, coin operated terminal. It would seem there finally is one. SFNET, PO Box 460693, San Francisco, CA 94146; (415)695-9824 voice.



Is that Buddy Holly with an RJ-11 Table

INTERNET

SECOND ANNUAL EFF PIONEER AWARDS

The Electronic Frontier Foundation presented it's second annual Pioneer Awards in a March 10 ceremony at the Computer's Freedom and Privacy Conference at the San Francisco Marriott Hotel in Burlingame, California.

The five recipients were judged to have made significant and influential contributions to the field of computer-based communications. The judging panel consisted of Jim Warren, pioneer award recipient from 1992 and founder of the Computers, Freedom, and Privacy Conference, Steve Cisler of Apple Computer, Esther Dyson, editor of Release 1.0, and Bob Metcalfe, Editor of Infoworld.

Award recipients included:

PAUL BARAN

Paul Baran was the original inventor of the concept of packet switching, a technology of fundamental importance to data networks and eventually led to the TCP/IP network protocol used by the Internet. Baran also founded several communications companies including Telebit, Packet Technologies, Equatorial Communications, Metricom, InterFax, and Com21.

DR. VINTON CERF

Dr. Vinton Cerf led the research project which developed the TCP/IP protocol suite, the open system interconnection protocol used today by schools, government, corporations, and individuals to communicate over the Internet. Dr. Cerf also participated in development of ARPANET host protocols, Internet management, and network security programs for DARPA. He led development of the MCI Mail service. He is currently vice president of the Corporation for National Research Initiatives, and he founded the Internet Society.



*Mitch Kapor presents Pioneer Award to Ward Christensen
-author of first BBS software*

WARD CHRISTENSEN

Ward Christensen developed the software for the first microcomputer dial-in system which he christened a Computer Bulletin Board System or CBBS. He also wrote a program MODEM.ASM which evolved into XMODEM, one of the earliest file transfer protocols and one which became so ubiquitous that it became a defacto standard for the transfer of files between computer users.

DAVE HUGHES

Hughes has been an outspoken and effective grassroots evangelist and spokesperson for popular computer networking and electronic democracy for over a decade. He fashioned his own computer system at Old Colorado City Communications in 1985, and soon brought the municipal elected government of Colorado Springs online. He helped design and implement a personal computer network connecting one-room rural schoolhouses in Montana to worldwide information resources. He continually brings network connections and new applications to new populations both here and abroad.

TOM TRUSCOTT AND JAMES ELLIS

Usenet is a distributed bulletin board system with approximately two million readers worldwide. It came into being in late 1979 through the inspiration of Tom Truscott and Jim Ellis, combined with the design and programming efforts of

Steve Bellovin, Stephen Daniel, and Dennis Rockwell. Following USENET's introduction in 1980, the resulting and ever-expanding collection of "newsgroups" began to be carried and circulated by a growing number of networked sites. The ongoing work of numerous individuals has allowed Usenet to survive its increasing popularity. Daily traffic now approximates 20,000 articles, totaling 50 MB, posted to over 2000 different newsgroups.

Tom Truscott is currently a distributed computing professional at IBM in Research Triangle Park, North Carolina. He has authored a number of UNIX-related articles, and is a member of ACM, IEEE, and Sigma Xi.

James Ellis is currently the Manager of Technical Development at the Computer Emergency Response Team, created to assist Internet sites with computer security incidents. He is responsible for analyzing UNIX system vulnerabilities and for developing security tools for the Internet.

The EFF also held a board meeting at the Computers Freedom and Privacy Conference and continues to struggle to define its role as a lobbying organi-



John Perry Barlow presents Pioneer Award to Vinton Cerf- TCP/IP developer. Jerry Berman and Esther Dyson foreground

zation, and its relationship to local organizations and the network. Jerry Berman, named Executive Director of EFF was prominent at the convention and very much trying to appear "non-suit" and "online."

The EFF has apparently had a change of heart regarding their distancing from the network and BBS communities. Mike Godwin, who has done most of the work with BBS operators regarding legal issues, was reaffirmed with the EFF and will be joining the Washington office under Jerry Berman. And Cliff Figallo, briefly director of the now closed Cambridge office, is relocating back to California but will now take charge of online communications - working with the eff.org site, the CompuServe EFF forum, and other online forums.

At the Pioneer award ceremony, co-founder Mitch Kapor again reiterated the need for backing and support of the EFF from the online community through memberships. Memberships are fully tax deductible at \$20.00 per year for students, \$40.00 per year for regular members, and \$100.00 per year for organizations. You may, of course, donate more if you wish. Memberships can be forwarded by mail to The Electronic Frontier Foundation, Inc., 666 Pennsylvania Ave., Washington, DC 20003; (202)544-9237 voice; (202)547-5481 fax; Internet: eff@eff.org

BOOK OF SMILES

O'Reilly & Associates publishes smallish books of a very technical nature, but usually on subjects that we find very useful as the world of bulletin boards and the world of the Internet move toward a merge. We've reviewed a number of their "Nutshell" series books in the past.

But we recently received one that serves little purpose beyond cute - with a very modest \$5.95 price tag that makes cute obtainable. The book is titled SMILEYS, by David Sanderson, and consists of over 650 emoticons (smiley faces) compiled by Sanderson. In 93 pages, Sanderson covers most of the smileys you may have encountered, and a great many

others you may not have thought of. Emoticons are little faces designed using keyboard characters that you view sideways. They are used to impart some sense of humor or context in message text that could be viewed as humorous, or just as easily, as an attack if it did not include a "smiley". The basic :-) smiley has evolved into hundreds of variants including:

;-) winking smiley
;-) confused smiley
8-O shocked smiley
;-) curly hair
;-) with glasses
;- { sad/confused

In recognition of the publication of "Smileys", O'Reilly & Associates has announced "The Best New Smiley Contest." The person who submits the best smiley not already found in SMILEYS, will win \$500. People interested in submitting their best smileys should do so before the contest closes October 1, 1993. Compiler David Sanderson will be one of the judges. Submit your smiley to smiley@ora.com or by street mail to "Smiley Contest", O'Reilly and Associates, Inc., 103 Morris St. Sebastopol, CA 95472. (800)998-9938 voice; (707)829-0515 International; (707)829-0104 fax. David Sanderson can be reached at dws@seec.wisc.edu.

You do not have to purchase the book to enter the contest. A list of smileys included in the book is available by telnet at <telnet:gopher.ora.com>. Item 1 on the menu is NEWS FLASH! and contains the entire list.

To promote the book, O'Reilly is also featuring a "Smiley Contest". Anyone can submit new smileys, and author David Sanderson will pick the best new smiley (not currently included in the book). The winner will receive \$500. Smiley entries can be e-mailed to smiley@ora.com before October 1, 1993.

FULL TEXT FEDERAL REGISTER AVAILABLE ONLINE

Commercial providers of government information are in an awkward position. For most of the online commu-

nity, these are the "unclean." They take information we've already paid for, and then try to sell it to us, usually for fairly proud prices. The information itself is in most cases simply not copyrightable, and the value added component they put into their product is hard to differentiate, and easy to appear to remove.

The government is part of the problem. True enough the information is there and it should belong to us. But bureaucrats have a million ways to justify fairly enormous prices for information - almost entirely dedicated to making people go away so they can deal with the minimum number of consumers. The net effect is that anything can be had for a price, but only very large companies can afford it.

Each day, Congress publishes a book called the Federal Register. Available by 08:30 each morning, this is the official book of record of activity in the Federal Government and an enormous amount of information is contained in it. Actually, anyone can subscribe to the printed book at \$1000 per year for 1st Class postal delivery, or \$400 per year sent book rate. The Government Printing Office DOES make it available in data format on 9-track tapes in ATEK format - a popular publishing system format from sometime around the 3rd century BC. But daily delivery of these tapes runs a cool \$40,000 per year.

Counterpoint Publishing has been developing a niche in info-land by taking the GPO tapes, stripping out the control codes to get down to ASCII text, indexing the various articles and information bits, and providing them on a weekly CD-ROM complete with access software. Subscriptions to this weekly CD-ROM service run \$1950 per year. They also have archives of the Federal Register going back three years.

But for some customers, even weekly access is too slow. And in response to customer requests, Counterpoint began looking at ways to put the service online. They found a company in their own office building titled The

UNI-ROM

Your CD-ROM Source

NightOwl's 8.0 In Stock!

Nightowl 8.0	\$42	Erotic Encounters	\$49
Nightowl 7.0	\$29	Gifty Gold	\$29
Nightowl 8.0 & 7.0	\$62	Busty Babes	\$49
Shareware Tiger	\$39	Seedy Rom 7th Heaven	\$39
America's Premier	\$29	GBL (gay - bi)	\$39
Gigabyte Gold	\$39	Ecstasy Hot Pies	\$49
Phoenix 3.0	\$25	PC-PIX 3	\$39
So Much Shareware 2	\$29	My Private Col. 2	\$49

After CD's - MUST wait 21 days after 21

Say you saw us in **BOARDWATCH** and purchase any 3 CD's listed above and get a 4th CD listed above FREE!



Order On-Line!

COD



VOICE	(619) 279-1139	5694 Mission Center #449
BBS	(619) 279-4774	USR Dual
FAX	(619) 561-4253	San Diego, CA 92108 USA

DALLAS Remote Imaging Group

BBS On-Line Satellite Directory

(214) 394-7438 BBS (214) 492-7747 FAX (Internet: k51w.jonestar.org/click/gfw)

The DRIG BBS is the premier source of information on satellite tracking, satellite imagery, telemetry analysis, tracking programs, satellite databases, NASA, space communications, etc.

On-Line Since

1985

Over 6 GIGABYTES of files related to satellites, Amateur Radio, Digital Image Processing, Digital Signal Processing, Amateur Television AND MUCH MORE!
6 LINES AND 8 PC'S NO WAITING!

- USR Dual Standard 14400bps V.32bis modems
- ON-LINE VISA/MASTERCARD Registration
- CD-ROMS with NASA VOYAGER IMAGES
- ON-LINE HAMCALL Lookup Application
- Thousands of Satellite Images of Earth
- DAILY Download from Weather Satellites
- Satellite Keplerian Elements Updated Daily
- Internet Access with Hundreds of News Groups
- Echo Mail with Conference Message Forwarding
- Off-Line Rosemail readers for easy reading
- Multiple Doors For Satellite Databases

YEARLY MEMBERSHIP WITH OR WITHOUT INTERNET USE VISA OR MASTERCARD OR SEND CHECK FOR SUBSCRIPTION RATES (Inc. tax)

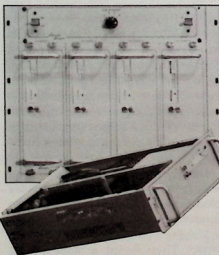
1 YEAR MEMBERSHIP - FULL DOWNLOADING - no rates.....\$32.50

1 YEAR MEMBERSHIP - FULL DOWNLOADING - Internet Access.....\$43.40

Dallas Remote Imaging Group BBS
P.O. Box 117088, Carrollton Texas 75011-7088

INTRODUCING THE CUBE.

*The Flexible,
Affordable
Rack System.*



With "Cube," from CEC, you can organize and expand your BBS or Networks' communication system easily, economically and efficiently.

Each "Cube" is a 15" x 15" x 15" case that holds up to 4 processors — 286, 386, or now a 486! And every processor comes standard with a 1.44 Mb drive, IDE/Floppy controller, and your choice of a MGA or VGA monitor card. What's more, each processor can handle up to 3-16 bit cards and 2-8 bit cards, plus, you can mount a 3 1/2" hard drive internally.

With the Cube, you can Hot Swap units quickly and easily, and, you can stack them up to 5 Cubes high...housing up to 20 processors neatly and efficiently.

To find out more about the Cube rack system including CyFax and Remote Access servers, call us today. We can also help you to custom design a rack system for special requirements.



COMPUTERS EFFICIENTLY, INC.
208 East 51st Street
New York, N.Y. 10022

800-477-0791 BBS: 212-885-3101

DSC

- * ftp & telnet from DSC
- * Fresh Adult GIFS Daily
- * 8 Gigabytes

- * 2,500 Conferences from; ILink, Rime, Annex, Usenet, Internet EMail, SmartNet, FidoNet, AfterDark, AdultLinks & ThrobNet

FAST ACCESS w/VISA & MASTERCARD
1200/2400e (215) 443-9434
v.32bis (215) 443-7390
USR HST/DS (215) 443-5830

Internet Company (internet.com) and reached an agreement to put the Federal Register online via Internet.

They've done a pretty thorough job of it. It's offered a variety of different ways. A full feed of the days register comprises about 2.5 MB daily on average - though it can run 5-6MB on days where the bureaucratic bees have been busy. It can be routed to your Internet site in a format for Gopher or WAIS access at between \$2000 and \$6000 per year depending on the number of users at your site.

They also make the Register available in NNTP (Usenet News) format as a series of some 17 newsgroups:

agriculture
commerce
defense
education
energy
environ
finance
foreign
govern
health
humanserv
legal
science
transport
misc

These are available for \$500 per year per newsgroup or \$2000 per year for the full set. There is a 50% discount for educational institutions.

While these prices may be feasible for institutions and large commercial services, they're a bit proud for individual users. But the company does run a service you can access by telnet at a price of \$10 per hour MC/VISA/check at netsys1.netsys.com. And they're fairly open about letting you try it out before committing to use. If you telnet netsys1.netsys.com and logon as FEDREG with password REGISTER, you can browse about the system a bit and sample the wares.

The system is actually extremely well done compared with most services we've seen on the Internet. It uses the Internet Gopher Information Client Version 1.1 and it actually makes things quite accessible. The system

Gopher Information Client v1.11 Federal Register by Agency Name

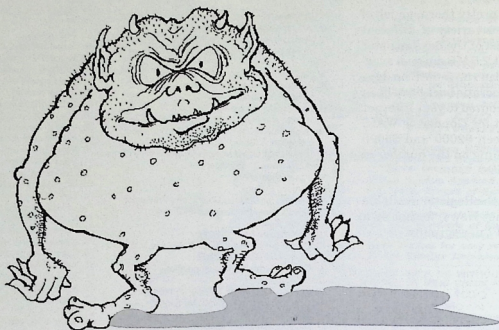
1. Administrative Conference of the United States
2. African Development Foundation
3. Agency for Health Care Policy and Research
4. Agency for Toxic Substances and Disease Registry
5. Agricultural Marketing Service
6. Agricultural Research Service
7. Agriculture Department
8. Air Force Department
9. Animal and Plant Health Inspection Service
10. Architectural and Transportation Barriers Compliance Board
11. Arms Control and Nonproliferation Policy Office
12. Army Corps of Engineers
13. Army Department
14. Census Bureau
15. Centers for Disease Control and Prevention
16. Children and Families Administration
17. Coast Guard
18. Commission on Civil Rights
19. Committee for Purchase from People who are Blind or Severely Disabled
20. Committee for the Implementation of Textile Agreements
21. Commodity Futures Trading Commission
22. Community Planning and Development Agency
23. Consumer Product Safety Commission
24. Copyright Royalty Tribunal
25. Customs Service
26. Defense Department
27. Defense Nuclear Facilities Safety Board
28. Drug Enforcement Administration
29. Education Department
30. Employment Standards Administration
31. Employment and Training Administration
32. Energy Department
33. Environmental Protection Agency
34. Environmental Restoration and Waste Management Office
35. Equal Employment Opportunity Commission
36. Export Administration Bureau
37. Fair Housing and Equal Opportunity Agency
38. Farm Credit Administration
39. Federal Aviation Administration
40. Federal Communications Commission
41. Federal Crop Insurance Corporation
42. Federal Deposit Insurance Corporation
43. Federal Election Commission
44. Federal Emergency Management Agency
45. Federal Energy Regulatory Commission
46. Federal Grain Inspection Service
47. Federal Highway Administration
48. Federal Housing Finance Board
49. Federal Maritime Commission
50. Federal Mine Safety and Health Review Commission
51. Federal Railroad Administration
52. Federal Reserve System
53. Federal Trade Commission
54. Federal Transit Administration
55. Fiscal Service
56. Fish and Wildlife Service
57. Food and Drug Administration
58. Food and Nutrition Service
59. Foreign-Trade Zones Board
60. Forest Service
61. Fossil Energy Office
62. Health Resources and Services Administration
63. Health and Human Services Department
64. Housing and Urban Development Department
65. Immigration and Naturalization Service
66. Indian Affairs Bureau
67. Interior Department
68. Internal Revenue Service
69. International Trade Administration
70. International Trade Commission
71. Interstate Commerce Commission
72. Justice Department
73. Labor Department
74. Land Management Bureau
75. Legal Services Corporation
76. Management and Budget Office
77. Military Traffic Management Command
78. Minerals Management Service
79. National Aeronautics and Space Administration
80. National Assessment Governing Board
81. National Credit Union Administration
82. National Endowment for the Arts
83. National Foundation on the Arts and the Humanities
84. National Highway Traffic Safety Administration
85. National Institutes of Health
86. National Labor Relations Board
87. National Marine Fisheries Service
88. National Oceanic and Atmospheric Administration
89. National Park Service
90. National Science Foundation
91. National Transportation Safety Board
92. Navy Department
93. Nuclear Regulatory Commission
94. Overseas Private Investment Corporation
95. Patent and Trademark Office
96. Pension Benefit Guaranty Corporation
97. Personnel Management Office
98. Postal Rate Commission
99. Presidential Documents
100. Public Health Service
101. Railroad Retirement Board
102. Rural Electrification Administration
103. Securities and Exchange Commission
104. Small Business Administration
105. Social Security Administration
106. Soil Conservation Service
107. State Justice Institute
108. Thrift Supervision Office
109. Trade Representative
110. Transportation Department
111. Treasury Department
112. United States Fire Administration
113. United States Information Agency
114. Veterans Affairs Department
115. Victims of Crime Office
116. Western Area Power Administration
117. miscellaneous

can handle 60 simultaneous users. The main menu lists: Information About This System, The Federal Register, Commerce Daily, and The New Republic Magazine. Commerce Daily is a publication covering various government contracts,

requests for proposal, solicitations for bid, and so forth. It is pretty much required reading for government contractors.

The New Republic Magazine actually isn't a government publication at all,

Meet the Monster...



Hackers World BBS **Over 16 Gigabytes of Files...**

- ◆ 24 Inbound high speed lines supporting 1200-38, baud rates, V32b / V42bis- including 5 HST D/S.
- ◆ World-Wide Connection for Echomail through FIDONET and ADULTNET "OVER 300 NATIONAL & INTERNATIONAL CONFERENCES"
- ◆ Connection to over 30 File Distribution Networks...Bringing you the LATEST in PUBLIC DOMAIN/SHAREWARE FILES!!!
- ◆ Unlimited Downloads with NO upload/download ratios...
- ◆ USA Today Online News Service, Featuring the latest International and National news and regional weather and sports...
- ◆ Serving the Online BBS community since 1988...

CALL TODAY and subscribe to one of the LARGEST and FASTEST GROWING Bulletin Board Services in the U.S. Today. THERE ARE NO "HIDDEN CHARGES OR ADDITIONAL FEES" to use any of the services on "The Monster" !!

Hackers World BBS

**VOICE - (309) 672-4406 DATA LINES - (309) 672-4405 V32B, V42B 14,400 BPS
(309) - 672-4447 USR HST DUAL STANDARDS
Mastercard & Visa as well as Personal Checks Gladly Accepted
Fees Based on Annual or Semi Annual Rate**

but rather a magazine about government with mucho editorial.

But the heart of the system is the Federal Register. You can access the register by government agency, by topical area, or with a pretty handsome full text keyword search. This last is most useful. We entered the word MODEM and retrieved easily 40 entries - various notices by government agencies of software and electronic filing requirements by modem. But we did find one interesting note about the Federal Energy Regulatory Commission Commission Issuance Posting System (CIPS) a BBS operating at (202)208-1781.

The listing by agency basically sorts all Federal Registry daily articles into 117 different categories based on who's ox got gored.

One feature of this Gopher version we immediately found fascinating was the e-mail deliver service. Any article of interest you find on the system can be delivered to your e-mail box. Simply select <m>mail and the system will prompt you for an e-mail address. The system will then "deliver" that document to your mailbox anywhere within the reach of the Internet. Very handy.

While the bulk of the information on this system is government information, the indexing and search features of the system really are quite well done and comprise a significant added value worth the \$10 per hour connect fee for many who might need the information. Given that much of what happens within our government does show up in the Federal Register daily, this comprises an invaluable research tool. Counterpoint Publishing, 84 Sherman Street, Cambridge, MA 02140; (800)998-4515 voice; Internet: fedreg@internet.com.

NETWORKING FROM ST. PETERSBURG

by Arcady Khotin

Dear Jack!

I'm so sorry for being so procrastinate with my reports! Well, better late than

never. Just one more thing to lift a burden of my guilty bit: January's issue was brought to me only in mid. February! Apparently, KGB guys were too busy making copies of your interesting articles <g>.

I will try to catch up a bit, describing what is going on in the three main telecommunications areas we have:

- FIDO,
- Internet/Relcom, GlasNet, Sprint and others
- Commercial Networks and business activities

Please, correct me, if this is not the topics you'd like to hear from St.Pete.

Just the day before yesterday, on Saturday, Mar. 6, I talked with Dave Hughes from Colorado (He was in Moscow, and I went there to meet with him). What a great guy! Full of energy, able to energize everybody around. Geez, I'd like to spend some time in his favorite computerized bar <g>. As he said - physically, I'm here, but my mind is there. If only we'd have free access to IP links...

Was shown his TELEDRAW. I'm a bit envious with the Moscow guys - why should they always be chosen, but otherwise am very glad with their results and proud, that this program was written in Russia. Hope to bid for MAC version of his TELEDRAW.

FIDO:

Fall and Winter were good seasons for our FIDO community, we managed to add several more echo areas to the vast amount the ones we are supporting in St.Pete (can send you a full list on request). Half a dozen more BBS added since your last report in February's issue of Boardwatch.

The more FIDO gets wider and wider appreciation in Russia (and CIS countries), the more we need something as developed, but based on some other technology, like RIME, for example. You guys are lucky to have almost all of the Networks easily accessible - it gives you the power to choose the best

one, most suited to ones needs. Over here - we are doomed to have FIDO, and only FIDO, because of our inability to arrange links with the outside world. Either we have to beg with the Networking community to poll us every night, or have to rely on our own enthusiasts, who'd manage to force their company to pay for their calls abroad.

As far as I know, all Russia is using practically two or three tiny dial up links with the West - Yury Zaitsev from Tallin polls Finland, Peter Kvitek from Moscow also calls Finland and Michael Pogrebniak from St.Pete polls Germany. There were some guys in Novosibirsk, who used to get calls from Holland, some other guys from Minsk, who'd get some info from Poland, but the three of the above links are the main ones.

As usually, our FIDO conferences are full different stuff - from Esther Dyson's recent RelEast 1 issue, to discussions about the underground infrastructure we allegedly have in St.Pete and Moscow.

The structure of FIDO users is quite different in Russia and US, BTW. Our users are mostly corporate, only tiniest part has computers at home, available day and night. As a result - heavy load on BBS during office hours (and with several time zones, as we have, it could be almost around the clock for the popular boards, like JV Dialogue 1st, in Moscow, or Kronverk or Spider's Nest in St.Pete.). Different structure is responsible for some commercialization of our FIDO, unlike you have in your country. Corporations want their computers to work and bring profit, that's why most of our FIDO boards have to carry SU.business, or SPB.business, or ???business echoes. Those echoes aren't free, they were created to promote some goods, to promote some services and they have to cover corporate expenses for the BBS handling.

Even being poor, as we are, some of us do manage to get their bosses to buy them expensive high speed modems, like US Robotics HST DS, or ZyXel. They become our backbone nodes auto-

matically. New feature of ZyXel to handle speech becomes very hot topic here. We are trying to invent different ways to utilize it. How about US? Do you people use these fancy features?

Phone lines quality keeps going down, while prices tend to rise. Only a few of us could enjoy using electronic telephone stations - most of others are connected to the very old ones, with stepping relays. It is most frequent cause of the carrier drop when one is connected to the other's modem and third party calls. What we'd do without ZMODEM?

INTERNET

Internet/Relcom grows even more rapidly than FIDO. These guys know what they are doing, and despite some minor problems, we all are very grateful to them for opening us a window to the rest of the world.

Prices, as in all of our country are rising, but not as far as consumer goods' ones, thank God! I can provide your readers with current prices on request.

Services are also growing. There are already a number of independent mail servers, ready to provide some additional regional info. GPNTB - the biggest technical library in the Russia, now offers its services as a source of the article titles for about a hundred of different technical Western magazines. Some servers offer access to their specialized data bases - on Law, Taxes, etc.

New network started -Relarn, based on Relcom as a carrier. This network supposed to be for the scientists and scientific institutions. Unfortunately, all I know is that it has to be much cheaper than Relcom, but it's commercial use is totally restricted.

GlasNet got a new popularity after adding USENET newfeed and, especially, becoming available through x.25 link from St.Pete. Company named TransInform is providing this link at very low cost for GlasNet users. As attractive as it is, it still well far from working properly. TransInform guys still have no rotary number, are often busy and hand when connected. Sprint is still hiding from an ordinary

public behind the high fence of the central telegraph building. How do they work, how do they attract customers is an enigma for me. I've been several times to their office, talked with them, used their services, about the very existence of some of them they didn't know! But, alas, there is only Sprint, or VNIIPAS in Moscow, or direct dial - for all of the ones, who'd like to use Compuserve or MCI Mail services from St.Pete. Being almost monopoly, they can afford to be that dumb <g>.

COMMERCIAL NETWORKS

Commercial networks are quietly mushrooming over here! Young guys, with just a couple of month's experience of running FIDO board, are hired with great salaries to run closed commercial networks. This is because most of the money are being done now in commerce. To be able to have price list from St.Pete, Novosibirsk and Vladivostok at the same time becomes essential, and these guys keep installing pirated Max and FD on their 286 clones to enable them to get this info. < FAX is almost useless on a distance more than several hundreds of kms in Russia, alas>.

Some of these networks started gating each other, some even dare to gate Relcom, which, compared to their tiny leak is an avalanche of info, with it's great relcom.commerce.*** groups, responsible for almost 90 % of the traffic.

More and more business proposals find their way to our Relcom groups. Guys offer to run newsletter, another one offers cheap cigarettes, third one talks about software being developed in Russia for his company. This is great, this shows that we become known to world Internet community and give us some hopes for the future.

Well, Jack, this is about all for today. Hope to hear your critics and your questions if any. My apologies again for the delay and great thanks for your great magazine! In April of 1991 I had my small letter printed in PC World. Do you know how many answers it got me? 11! And your one brought me well over twice that amount! Till the next report. Arcady Khotin
agh@nwpc.spb.su

THIS MONTH'S LIST

This month we present a list of 358 technical support/product support bulletin boards courtesy of Gary Barr, of Evansville, Indiana. Mr. Barr updates this list each month as the SUPRT BBS List and makes it available in the file SUPRTnnn.ZIP where nnn equals the last digit of the year and a two digit month (March, 1993 is SUPRT303.ZIP). Barr operates a Remote Access BBS titled Digicom 1:2310/200 at (812)479-1310 and also compiles the Remote Access BBS List.



PRODUCT / TECHNICAL SUPPORT BULLETIN BOARD SYSTEMS

BBS	PHONE	SUBJECT	BBS	PHONE	SUBJECT
3Com	408-980-8204	. NETWORK CARDS	Clark Development Corp	801-261-8976	. PCBOARD BBS SOFTWARE
3rd Planet Software, Inc.	213-841-2260	. NETWORK ASST PLUS	Clear Software	617-965-5406	. CLEAR, ALL CLEAR
Abacus Concepts	616-698-8106	. STATVIEW, SUPERNOVA MAC	CNET	408-954-1787	. NETWORKING
Abaton Technology	415-438-4650	. LASER PRINTER, SCANNER	Coconut Computing Inc	619-465-0815	. COCONET BBS SOFTWARE
Accolade	408-296-8800	. GAMING SOFTWARE	Codenoll	914-956-1972	. NETWORKING BOARDS
Acer America	800-833-8241	. COMPUTERS & MONITORS	Colorado Memory Systems	303-679-0650	. TAPE BACKUPS
Adaptec	408-945-7727	. CONTROLLERS	Columbia Data Products	407-862-4724	. SCSI DRV'S FOR WD-7000
Addstor	415-324-4077	. SUPERSTOR	Communications Research	504-926-5625	. TERMINAL EMULATORS
Advanced Digital Corp	714-894-0893	. SCSI CTRL, TAPE BACKUPS	Complete PC	408-434-9703	. MODEMS, FAX, SCANNERS
Advanced Logical Research	714-458-0063	. ALR COMPUTER SYSTEMS	Computers International	213-823-3609	. ONLINE SHOPPING SFTW
All Computer	416-960-8679	. MOTHERBOARDS	Computer Peripherals	805-499-9646	. MODEMS
Alloy Computer Products	508-460-8140	. STORAGE DEVICES	Computer Support	214-404-8652	. ARTS & LETTERS SOFTWARE
Allied Telesis	415-964-2994	. NETWORKING	Computone	404-664-1210	. INTELLIGENT SERIAL CARD
Alpha Software	617-229-2915	. ALPHA DATABASE	Control	612-631-9310	. INTELLIGENT SERIAL CARD
Altima	510-356-2456	. LAPTOPS	Conner International	408-456-4415	. HARD DRIVES
Altsys	214-680-8592	. PHOTOGRAPHER	Continental Software	1-9-386-5218	. REMOTEACCESS BBS
Amdac Corporation	408-922-4400	. MONITORS	Core International	407-241-2929	. HARD DRIVES
American Megatrends (AMI)	404-246-8780	. AMI BIOS, MOTHERBOARDS	Coresl System	613-728-4752	. COREL DRAW
Apogee Software	508-365-2359	. GAMES, KEEN, SECRET AGENT	Cornerstone	408-435-8943	. SINGLE/DUAL PG MONITOR
Applied Engineering	214-241-6677	. FAX/MODEM, FASTMATH	Corvus System, Inc	408-972-9154	. NET SOFTWARE
Artisoft	602-293-0065	. LANTASTIC NETWORKING	Creative Labs	408-428-6660	. SOUNDBLASTER MUSIC CARD
Artist Graphics	612-631-7669	. COMMAND CENTER	Cross Communications	303-444-9003	. CROSS CONNECT
Ask Sam Systems	904-584-8287	. ASK SAM LAN	Cumulus	216-464-3019	. MEMORY, BOARDS
Asymetrix	206-451-1173	. MULTIMEDIA SOFTWARE	DAC Software	214-931-6617	. DAC EASY ACCOUNTING
AST Research	714-727-4723	. COMPUTER SYSTEMS	DAK Online Resource Center	818-717-5313	. ALL DAK PRODUCTS
ATI Technologies	416-756-4591	. VIDEO CARDS/MODEMS	Darana Technology Group	714-994-7410	. SYSTEM SLEUTH
AT&T Computer Systems	201-769-6397	. COMPUTERS	Darwin Systems	301-251-9206	. DARWIN BBS LIST
Automated Design Systems	404-394-7448	. WINDOWS WORKSTATION	Data Access	305-238-0640	. DATAFLX
Award	408-371-3139	. BIOS	Datadesk/Prometheus	503-691-5199	. KEYBOARDS/TRACKBALLS
Beagle Bros	619-558-6151	. BEAGLE WORKS, TIMEOUT	DataEase Int'l	203-374-6302	. DATEBASE, GRAFTALK
Blackmond Software	505-589-0319	. RAMAIL, CCTR	Dataproducts Corp	818-887-8167	. DATAPRODUCTS PRINTERS
Boca Research	407-241-1601	. MEMORY CARDS, MODEMS	Datastorm	314-875-0503	. PROCCOM PLUS
Borland	408-439-9096	. C, QUATTRO, DBASE	Data Technology	408-942-4197	. HD CONTROLLERS
Bourbaki	208-342-5823	. FRACTOOLS	David Systems	408-720-0406	. NETWORKING HARDWARE
Brightbill Roberts	315-472-1058	. LAN SERVER/NET REMOTE	Dayna Communications	801-535-4205	. LOCAL TALK, E-NET FOR MAC
Brightwork Development	914-667-4759	. NETWORKING UTILITIES	DCA	404-740-8428	. CROSSTALK/IRMA
Brown Bag Software	707-771-7654	. POWERMENU	Dell Computer Corp	512-338-8528	. DELL MAIL ORDER CLONES
Buerg Software	408-778-8944	. LIST SOFTWARE	Delphi	800-365-4636	. DELPHI ONLINE SERVICE
Buttware	206-544-7875	. PCFILE, PCALC, PCWRITE	Diamond Computer	408-730-1100	. VIDEO BOARDS
Calcomp	714-821-2359	. DIGITIZERS	Digiboard	612-943-0812	. INTELLIGENT SERIAL CARD
Calera Recognition Systems	408-773-9068	. OCR SOFTWARE	Digital Communications	513-433-5080	. 10-NET
Campbell Services	313-559-6434	. ONTIME SCHEDULER	Digital Research	408-649-3443	. DR DOS
Cannon Printer Division	516-488-6528	. LASER/DOT MATRIX PRNTRS	Digital Vision	617-329-8387	. VIDEO IMAGING
Cardinal Technologies	717-293-3074	. CARDINAL MODEMS/FAXS	Disk Technician Corporation	619-272-9240	. DISK TECHNICIAN GOLD
Cardz	604-734-5400	. FRACFORM COMM/SOFTWARE	Disston Ridge Software	813-327-0822	. POGLOSSARY & TELEMAGIC
CBIS, Inc.	404-446-8405	. NETWORK E-MAIL	Distributed Processing Tech	407-831-6432	. CONTROLLER CARDS
cc:Mail	415-691-0401	. CC-MAIL E-MAIL	D-Link Systems, Inc.	714-455-1779	. NETWORK PRINT SERVER
Central Point	503-690-6650	. PC TOOLS	DNA Networks, Inc.	215-296-9558	. MICRONET NETWORK
Certus	216-546-1508	. SUPERNOVI	Dove Computer	919-343-5616	. MODEMS/FAX BOARDS
Cheney Software	516-494-3445	. NETWORK TAPE BACKUPS	DTK	818-333-6548	. DTK MOTHERBOARDS
Chipsoft	619-453-5232	. MEMORY	Dudley Software	615-966-3574	. DORWAY SOFTWARE
Chwat Development Co	318-487-0800	. ULTRABBS	Dynamic Microprocessor	516-462-6638	. COMPUTER CPUS
Citizens America Corp	310-453-7564	. PRINTERS	EagleSoft	812-479-1310	. SHOPPERS ASST, CALLAWAY
Citrix Systems	305-346-9004	. NETWORKING SOFTWARE	Elite Business App's	410-987-2335	. RAMJET
Clarion Software	305-785-9172	. REPORT WRITER	Emao/Exever	510-226-9694	. TRACKBALL, MODEM

BBS	PHONE	SUBJECT	BBS	PHONE	SUBJECT
Emerald Systems	619-673-4617	. DATA MANAGEMENT	LaserGo	619-450-9370	. GOSCRIPIT
Enable Software	518-877-6316	. ENABLE BUSINESS SOFTWARE	Lattice	708-916-1200	. LATTICE SOFTWARE
Epson America, Inc.	408-946-8777	. EPSON COMPUTER PRODUCT	Leading Edge	508-836-3971	. COMPUTER SYSTEMS
Equinox Systems, Inc.	305-378-1696	. MULTIPORT COMM PORTS	Lexmark	800-453-9223	. PRINTERS, KEYBOARDS
eSoft Inc.	303-699-8222	. TBBS BBS SOFTWARE	Liant Software	206-236-6485	. LANGUAGE SOFTWARE
ETIS Incorporated	801-265-0919	. GUI & LASER PRINTER APPS	Logical Connection	504-295-3344	. LOGICAL CONNECTION
Exis	416-439-8293	. TELIX COMM SOFTWARE	Logitech	510-795-0408	. MOUSE, SCANNERS
EZX Publishing	713-280-8180	. EZ-FORM, EZ-DISKOOPY	Lotus	617-893-7000	. LOTUS SPREADSHEET
Family Scrapbook	904-249-9515	. FAMILY SCRAPBOOK	Lotus	404-395-7707	. LOTUS WORD PROCESSING
Fifth Generation Systems	504-295-3344	. FASTBACK, LONDON BRIDGE	Mace, Paul Software	503-482-7435	. MACE UTILITIES
Folio	801-375-9077	. MAILBAG	Madge Networks	408-441-1340	. NETWORKING HARDWARE
Foresight Resources	816-891-8465	. DRAFPC CADD SOFTWARE	Magee Enterprises, Inc.	404-446-6650	. AUTOMENU/TREEVIEW
Frederick Engineering, Inc.	301-290-6944	. DATA COMM ANALYZER	Magiltron Technology	516-454-8262	. MOTHERBOARDS
Fresh Technology	602-497-4235	. MAP ASSIST, NETWORK SFTW	Magnavox	310-532-6436	. COMPUTERS/MONITORS
Fujitsu America, Inc.	408-944-9899	. PRINTERS, HARD/FLOPPY DRV	Main Lan	407-331-7433	. MAINLAN
Future Domain	714-253-0432	. TAPE BACKUPS	Mannesman Tally	206-251-5513	. PRINTER ACCESS
FutureSoft Engineering	713-588-6870	. DYNACOMM	Manx Software Systems	201-542-2793	. AZTEC C
Galacticomm	305-583-7808	. MAJOR BBS SOFTWARE	Marstek, Inc.	404-424-3146	. HAND SCANNER
GAP Development Company	714-493-3819	. GAP BBS SOFTWARE	Matrix Technology	617-569-3877	. SOFTWARE
Gateway BBS	605-232-2109	. GATEWAY COMPUTERS	Maxi Host Support	209-836-2402	. MAXI HOST BBS SOFTWARE
Gateway Communications	714-863-7097	. NETWORK HARDWARE	Maxtor/Miniscube	303-678-2222	. HARD DRIVES
Gazelle Systems	801-375-2548	. BACKKIT, OPTUNE, Q-DOS	Maynard Electronics	407-263-3502	. TAPE BACKUPS
Gecho	316-265-5313	. FIDO MAIL PROCESSOR	McAfee Assoc	408-988-0044	. VIRUS PROTECTION
Genie Information Services	800-638-8369	. GENIE ONLINE SERVICE	Media Vision	510-770-0968	. MULTIMEDIA PRODUCTS
Genoa Systems	408-943-1231	. TAPE BACKUPS	Micro Display Systems	612-438-3513	. MONITORS
Gensoft Development	206-562-9407	. SUPERCALC	Microcom	617-762-5134	. CARBON COPY, WORKMAN.
Gibson Research	714-362-8848	. SPINRITE	Microdyne	703-739-0432	. NETWORK HARDWARE
GigaTrend, Inc.	619-566-0361	. HIGH CAPACITY HARD DRIVE	Micron Technology	208-366-4530	. VIDEO BOARDS
Globe Village Comm	415-390-8397	. TELEPORT, POWERPORT	Micronics	510-651-6837	. COMPUTER, MOTHERBOARD
Goldstar Technologies	403-432-0236	. MONITORS & COMPUTERS	Micropolis Corp	818-709-3310	. HARD DRIVES
Great American Software	603-889-7292	. ONE-WRITE PLUS ACCT	Microrim	206-649-9836	. R-BASE
Gupta Technologies, Inc.	415-321-0549	. SQL WINDOWS	MicroProse	301-785-1841	. GAMING SOFTWARE
GVC Technologies	201-579-2380	. MODEMS	Microsoft	206-637-9009	. WORD, WINDOWS
Hayes Microcomputer	800-874-2937	. MODEMS	Microsystems Software	508-875-8009	. CALANDER SCHEDULER
Hayes Microcomputer	404-446-6336	. MODEMS	Microtech	203-469-6430	. MAC MEMORY
HDC Computer	206-869-2418	. WINDOWS ENV SOFTWARE	Microtest	602-996-4009	. LANPORT
Headland Technology	416-656-0503	. COMPUTERS	Mitsubishi	714-636-6216	. MONITORS
Hercules Computer	510-540-0621	. MEMORY EXP, VIDEO CARDS	Mountain Network Solutions	408-438-2665	. TAPE BACKUPS
IBM	404-835-6600	. IBM COMPUTER PRODUCTS	Mouse Systems (MSC)	510-683-0617	. MOUSE
Intelligent Graphics Corp	408-441-0386	. VM386, MULTITASKING	Multi- Tech Systems	612-785-9875	. MODEMS
IMC Networks	714-724-0930	. LAN NETWORK EQUIPMENT	Mustang Software	805-395-0650	. WILDCAT, QMODEM, OLX
IMSI Software	415-454-2893	. DESKTOP PUBLISHING	National Semiconductor	408-245-0671	. ETHERNET, MAINLINK
Infinity Computer Services	215-965-8028	. BAR CODE PRODUCTS	NEC Technologies	508-635-6328	. COMPUTER, PRINTERS
Infoclip Systems	408-727-2496	. MEMORY	NetWorth	214-869-2959	. ETHERNET CARDS
Informix	913-492-2089	. SMARTWARE, INFORMIX	New Media Graphics	508-663-7612	. VIDEO CAPTURE BOARDS
InfoShare	703-803-8000	. FALKEN BBS SOFTWARE	Night Owl BBS	716-881-5688	. NIGHT OWL CDROM DISK
Innovative Data Concepts	215-357-4183	. TCXL	NISCA	214-446-0646	. SCANNERS
Inset Corporation	203-740-0063	. HIJACK GRAPHIC CONVERS	Norton-Lambert	805-683-2249	. CLOSE-UP/LAN
Insignia Solutions	415-694-7694	. ACCESS PC, SOFT PC	Novell	801-429-3030	. NOVELL NETWORKING
Intel	503-645-6275	. MATHCO, MODEM, FAX, CHIPS	Novell Desktop Systems	408-649-3443	. COMPUTERS
Intracorp	305-378-8793	. TRAVEL PARTNET	Number Nine	617-497-6463	. ADVANCED VIDEO
Iornega	801-778-4400	. TAPE BACKUPS	OCR Systems	215-938-7245	. READRIGHT
Irwin Magnetics	313-930-9380	. TAPE BACKUPS	Okidata	800-283-5474	. PRINTERS
Jetfax	415-324-1259	. JETFAX BOARDS	Omen Technology	503-621-3746	. DSZ - ZMODEM PROTOCOL
Jetform	613-563-2894	. JETFORM DESIGN	Ontrack Computer Systems	612-937-0860	. HD PREP SOFTWARE
JDR Microdevices	408-559-0253	. MAIL ORDER COMPONENTS	Open Network	718-638-2239	. NETWORKING
Kent Marsh	713-522-8921	. MAC SECURITY SOFTWARE	Orchid Technology	510-683-0327	. VIDEO CARDS
Kodiak Technology	408-452-0677	. NETWORK HARDWARE	Origin	512-328-8042	. GAMING SOFTWARE
Kurta Corp	602-243-9440	. DIGITIZER BOARDS	Pacific Data Products	619-452-6329	. LASER PRINTER PRODUCT
LAN Master	817-771-0233	. REMOTE ACCESS SOFTWARE	Packard Bell	818-773-7207	. COMPUTER SYSTEMS
LAN Systems	801-373-6980	. NETWORKING HARDWARE	Paindrome	708-505-3336	. NETWORK SOFTWARE
LAN Works	416-238-0253	. PROMS	Panasonic	201-863-7847	. PRINTERS, SCANNERS, CPU

BBS	PHONE	SUBJECT	BBS	PHONE	SUBJECT
Paperback Corporation	415-644-0782	SOFTWARE	Sunriver	512-835-8082	.UNIX SYSTEMS
Paradise Systems	714-753-1234	VIDEO CARDS	Supermac Software	408-773-4500	.SPECTRUM BOARD, MONITOR
Patton & Patton Software	408-778-9697	FLOW CHARTING SFTW	Supra Corp	503-967-2444	.MODEMS
Pentax Technologies	303-460-1637	SCANNERS, LASER PRINTER	Sydex	503-683-1385	.SHE
Phoenix Technologies	405-321-2400	MOTHERBOARD BIOS	Symantec	408-973-9598	.NORTON, PCANYWHERE
Pinnacle Publishing	206-251-6217	.DGE	Sysgen	408-946-5032	.DRIVE CONTROLLERS
Pinpoint Publishing	707-523-0468	MICRO COOKBOOK	Systems Compatibility	312-670-4239	.SOFTWARE BRIDGE, TOOLKIT
PKWare	414-354-8670	PKZIP COMPRESSION	Syquest	415-656-0470	.REMOVABLE MASS STORAGE
PLI	510-651-5948	REMOVABLE MEDIA	Swan Technologies	814-237-6145	.SWAN COMPUTERS
Plus Development	408-434-1664	HARD DRIVES	TEAMate	213-318-5302	.TEAMATE UNIX BBS
Practical Peripherals	805-496-4445	MODEMS	Tecmar	216-349-0853	.TAPE BACKUPS
Priam Systems	408-434-1646	HARD DRIVES	Telebit	408-745-3803	.MODEMS
Princeton Graphic Systems	404-664-1210	MONITORS	Telix Support	416-439-8293	.TELIX COMM SOFTWARE
Prometheus Products	503-691-5199	FAX/MODEMS	Template Garden Software	914-337-2008	.THE DOCUMENTOR
Proton	508-366-7827	NETWORKING BOARDS	Texas Instruments	512-250-6112	.PRINTERS, CPUS
Public Brand Software	317-856-2087	.SHAREWARE SOFTWARE	TheSoft Programming	415-581-3019	.THEDRAW ANSI SOFTWARE
Pure Data	214-242-3225	NETWORKING BOARDS	Thomas Conrad	512-836-8012	NETWORKING CARDS
Qmail	901-382-5583	QMAIL OFFLINE READER	Thumper Technologies	918-627-0059	.EZ-READER
QMS	205-633-3632	PRINTERS	Tiara Computer Systems	415-966-8533	NETWORKING CARDS
Quadram	404-564-5678	MEMORY SOFTWARE	Timeline Software	415-892-0408	SCHEDULERS
Qualitas	301-907-8030	386MAX & BLUEMAX	Timeslips	508-768-7581	.TIMESLIPS SOFTWARE
Quantum	408-894-3214	HARD DISK STORAGE	Tops microsystems	510-769-8774	.NETWORK OS/EMAIL
Quarterdeck Office Systems	310-341-3227	QEMM386	TopSoft Software	502-425-9941	.BBS DOORS, TOPED
QuickBBS	407-896-0494	QUICKBBS BBS SOFTWARE	Toshiba Printer Products	714-581-7600	.PRINTERS
Racal Interlan/Rabbit Soft	508-264-0345	NETWORKING CARDS	Trantor Systems	415-656-5159	.PARALLEL PORT SCSI
Race	305-271-2146	RACE USER EDITOR (RA)	Traveling Software	206-485-1736	.LAPLINK, BATTERY WATCH
Rams' Island Software	303-841-6269	.INCONTEXT	Trident Microsystems	415-691-1016	VGA CARDS
RelayNet National	301-229-5623	RELAYNET MAIL SYSTEM	Trius	508-794-0762	.ASEASYAS SPREADSHEET
Remote Control Int	619-431-4030	TELEMAGIC	True Vision	317-577-8783	.DISPLAY ACCELERATOR
Revelation Technologies	206-641-8110	ADVANCED REVELATION	TSR Systems	516-331-6682	.PALCOM-PARADOX COMPILER
Rix Software	714-476-0728	PAINT SOFTWARE	Turbo Tax	619-453-5232	.TURBOTAX SOFTWARE
Rybs Electronics	303-443-7437	MEMORY MANAGER	Turtle Beach	717-845-4835	WINDOWS SOFTWARE
Saber Software	214-361-1883	SABER NETWORK MENU	Unicom Software	317-784-2147	.UNICORN SOFTWARE
Salt Air BBS	801-261-8976	PCBOARD BBS SOFTWARE	US Robotics	708-982-5274	MODEMS
Samsung Info Systems	201-691-6238	COMPUTERS/MONITORS	US Sage	417-331-7433	.MAINLAN NETWORK
SEAbord	201-473-1991	ARC, SEADOG, AXE	Ven Tel	408-922-0988	MODEMS
Seagate	408-438-8771	HARD DISK CONTROLLER	Ventura Software	619-673-7691	.VENTURA PUBLISHER
Searchlight Software	516-689-2566	SEARCHLIGHT BBS SFTW	Vermont Microsystems	802-655-7611	.HIRES VIDEO BOARDS
SemWare	404-641-8968	GEDIT DOS EDITOR	Video Seven	510-656-0503	VIDEO CARDS
Sharp	404-962-1788	SCANNERS/COMPUTERS	Visual Business Systems	404-953-1013	VIDEO
Shiva Corporation	617-621-0190	FASPATH 4, BRIDGES	Volkswriter	408-648-3015	.VOLKSWRITER SOFTWARE
Sitka Corporation	415-769-8774	TOPS NETWORK OS	Vortex Systems	412-322-3216	.RETROCHRON BACKUP
Sierra Online	209-683-4463	GRAPHIC ADVERTUSE	Wacom	415-960-0236	GRAPHIC TABLETS
Sigma Design	510-770-0111	VIDEO BOARD, MONITORS	Walker, Richer, & Quinn	206-324-2357	.TCP/IP SOFTWARE
Silicon Valley Computers	415-967-8081	COMPUTERS	Wallsoft Systems	212-962-1923	.THE DOCUMENTOR
Sitka	510-769-8774	FLASHCARD	Walt Disney Software	818-587-4027	.CHILDRENS SOFTWARE
SMS Technology	510-964-5700	HARD DISK CONTROLLERS	Wangtek	805-582-3370	.TAPE DRIVES
Softnet	404-984-9926	FAX SOFTWARE	Weitek	408-522-7517	MATH COPROC
Softkone	904-878-9884	MIRROR III, TAKEOVER	Western Digital	714-753-1068	CONTROLLERS, HARD DRIVE
Softlogic Solutions	603-644-5556	.DISK OPTIMIZR, DOUBLE DOS	White Water Systems	708-328-9442	.ZORTECH, ACTOR
Softronics	719-593-9295	SOFTFORM PC	Windows Tech Support	206-637-9009	.WINDOWS/MICROSOFT
Software Products Intl	619-450-2179	OPEN ACCESS, WINDOW	Word Perfect Corp	801-226-4414	.WORDPERFCT, DRAWPERFCT
Software Security	203-329-7263	SOFTWARE COPY PROTECT.	Wordtech	415-254-1141	.DBXL, QUICKSILVER
Software Venture	510-849-1912	MICROPHONE SOFTWARE	Wyse	408-922-4400	TERMINALS/COMPUTERS
Solutions Systems	617-237-8530	BRIEF SOFTWARE	Xebec	702-883-9624	.HARD DRIVE
SparkWare	901-382-5583	QMAIL DOOR/READER	Xircom	818-878-7618	NETWORK ADAPTERS
Spectra Publishing	408-730-8326	POWERBASIC SOFTWARE	Xyquest	508-667-5669	CORRECT GRAMMER
PrintNet	800-546-1000	NETWORKING, PC PURSUIT	Xtree	805-546-9150	.XTREE/XTREE GOLD
Stac Electronics	619-431-5956	STACKER HD SOFTWARE	Zenographics	714-851-3860	.PIXIE, SUPER QUEUE
STB Systems	214-437-9615	VIDEO CARDS	Zoom Telephonics	617-451-5284	MODEMS
Storage Dimensions	408-944-1220	STORAGE DEVICES	Zsoft	404-427-1045	.PAINTBRUSH
Sunrise Software	408-256-9525	SUNRISE DOOR SOFTWARE	ZyXEL	714-693-0762	MODEMS

BOARDWATCH

LIST OF BBS LIST KEEPERS

This listing comprises a list of those who compile and maintain lists of bulletin boards, either by topical category, or by some geographic area or definition - often by area code. The primary bulletin board system where the list can be downloaded electronically is also included.

BBS LIST TOPIC	LIST AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
96 List - 9600+bps BBS	Ken Sukimoto	Downtown BBS	(213)484-0260
AC 516 Free Shareware BBS	Harold Stein	Long Island Exchange	(516)385-7882
Airline Pilot/JUMPSEAT BBSs	Rex Chadwell	ChicAAgo Hangar	(708)980-1613
Alaska AC 907	Patti Johnson	Alaska Pirate Soc.	(907)562-1854
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
Arkansas Area 501	Bob Underdown	The Gaslight BBS	(501)444-8420
ASP BBS Member List	Bob Ostrander	PBS-BBS	(317)856-2087
Astronomy/Space BBS	John Pickens	Starbase III BBS	(209)432-2487
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Atlanta Area 404	Rodney Aloia	INDEX System	(404)924-8472
Austin Area BBS List AC 512	Gordon L. Harlan	--ACE*BBS--	(512)258-9553
Autocad Related BBS	Jason Osgood	SAUG BBS	(206)644-7115
Baltimore Area 410	Brad Blase	Network BBS	(410)247-3797
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)337-1607
Black Run/Oriented BBS	Arthur "Rambo" McGee	BDPA BAC BBS	(707)552-3314
Business/Professional BBS	Dennis Hauser	Delight The Customer	(517)797-3740
California AC 310	Jim Walton	Illusions BBS	(310)804-3324
Central California AC 209	Jack Porter/Madera UG	Zen Den Systems	(209)675-8436
Central California Area 805	Larry Honore	His Board	(805)652-1478
Chicago	David Nathan	HURK BBS	(708)801-0823
Chicago	Paul Chartraw	Stillwaters	(708)403-2826
Cleveland Area 216	Eric Rickin	Wine Cellar	(216)382-2558
Commodore 64/128/Amiga BBS	John Rigali	Night Gallery	(818)448-8529
CompuCom Modem BBS List	Thomas Weathers	Referral Market BBS	(803)297-4395
Connecticut AC 203	Kevin Brook	Creative Edge BBS	(203)743-4044
Conservation/Nature BBS List	D.Wendling/JS Christianso	Coin of the Realm	(301)585-6697
Dallas/Ft Worth Area 214/817	Mark Robbins	Second Sanctum	(817)784-1178
Darwin National USBBS List	Bob Breedlove	Bob's BBS	(916)929-7511
Desktop Publishing BBS	Frank Atlee	Infinite Perspective	(301)924-0398
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
Ecology/Conservation BBS	Bob Chapman	EarthArt BBS	(803)552-4389
Engineering Related BBS	Arthur Petzelka	Computer Plumber	(319)337-6723
Genealogy Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Graphical User Interface BBS	David Shapiro	The Gooye (GUI) BBS	(212)876-5885
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357

BBS LIST TOPIC	LIST AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Kansas City Area 816/913	Roy Timberman	Sound Advice	(816)436-4516
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
List of Gay/Lesbian BBS	Eric Blair	S-TEK BBS	(514)597-2409
Macintosh BBS	Bill Taylor	Fort Mill Tabby	(803)548-0900
Medical Issues BBS	Edward Del Grosso	Black Bag	(302)731-1998
Milwaukee Area 414	Jay Jadofsky	Priplanus	(414)442-0170
Minnesota Twin Cities AC 612	Barry Watson	Abiogenetic BBS	(612)489-7983
National 800 Number BBS List	Michael Long	Hayes Online	(800)874-2937
National Adult BBS List	Clayton Manson	Titan BBS 1:3612/140	(904)476-1270
National BBS List	DP McIntire/Beth Spotts	Ameriboard	(412)349-6862
New Jersey AC 609	Dave Schubert	The Casino PCBoard	(609)561-3377
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
New Orleans BBS List	Jeff Jones	Southern Star BBS	(504)885-5928
Ontario Area 705	Alex Draper	Cottage Country BBS	(705)835-6192
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Orlando Florida AC 407	Matt Drury	London BBS	(407)895-1335
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
OS/2 Related BBS	Dave Fisher	LiveNet 1:170/110	(918)481-5715
Pennsylvania AC 215/609/302	Ron Brandt	DSC/VOICENET	(215)443-9434
Pinellas/Tampa Florida AC 813	Emery Mandel	Mercury Opus	(813)321-0734
Pittsburgh AC 412	Chas Stokes	Quad-Tech Systems	(412)262-4794
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
Raleigh NC Area Code 919	Mike Stroud	Micro Message Svc.	(919)779-6674
Republic of South Africa	Henk WOIsink	Catalyst BBS	(041)34-1122
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Rochester NY AC 716	Tracy Logan	Logan's Run	(716)256-2659
San Diego AC 619	Joe Nicholson	General Alarm	(619)669-0385
San Diego, CA AC 619	Ron Dipold	ComputerEdge	(619)573-1675
San Francisco Area 408/415/510	Julie McGrew	Bay List BBS	(510)339-1045
Seattle AC 206/West Washington	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(305)474-6512
Southern California	Mike Hefferman	SOCAL Corner	(213)422-7942
St. Louis AC 314	Beth Brooks	Fire Escape's Dir	(314)741-9505
Tacoma Washington AC 206	Richard Langsford	AmoCat BBS	(206)566-1155
Technical Support BBS List	Gary Barr	Digicom BBS	(812)479-1310
Tulsa Oklahoman Area BBS List	Linda Hargraves	Access America	(918)747-2542
U.S.S.R. BBS List	Serge Terekhov	Court Crimson King	7-3832-356722
Virginia AC 703/804	Scott Dickinson	TOSOR BBS	(703)366-4620
Washington DC BBS List	Mike Focke	Interconnect	(703)425-2505
Wildcat! BBS	Jim Harrer	Wildcat! HQ	(805)395-0650
Wisconsin 608		JW-PC Dataflex.HST	(608)837-1923

BOARDWATCH MAGAZINE

Classified Electronic Bulletin Board Advertisements

Advertise your electronic bulletin board/online information service in **Boardwatch Magazine**. Let our readers know who you are and what you're doing with on-line technology. To order a BBS ad in the Boardwatch Classified BBS ad section, call the Boardwatch BBS at (303)973-4222 and use our online ad entry system. In addition to standard list information, enter up to 255 characters of text describing your online service. - all for \$25 per month. Master Card or Visa only.

Chat Chalet (201)791-8850 Saddle Brook New Jersey since 04/91. Sysop: Ron Meier. Using Galactcom 6.03 with 16 lines on MS-DOS 80486 with 877 MB storage. Supra at 2400 bps. \$10.00 Monthly fee. Chat System. Send us your picture we will make it a GIF and put it on the BBS for all to see. "Where New Friends Meet"

Jezzebel's Parlour BBS (201)927-2932 Flanders New Jersey since 04/92. Sysop: Beverly Delisa. Using TBBS 2.2M with 12 lines on MS-DOS 80386 with 120 MB storage. U.S. Robotics at 9600 bps. \$50.00 Annual fee. Over 3 gigabytes of files, including adult graphics. New in-house scanned GIF files added each week. Online games and databases, user to user chat, conference areas, and adult matchmaking. The BBS with the feminine touch.

The Starship [BBS] (201)935-1485 Lyndhurst New Jersey since 07/80. Sysop: David Baker. Using TBBS 2.2M with 16 lines on MS-DOS 8086 with 4000 MB storage. U.S. Robotics at 19200 bps. No fee. Operating for 13+ years. Starship is one of the longest running, most successful BBS systems EVER! FREE public access, 4+ GIGabytes online, Adult & non-adult topics, chat, files, games, & databases. USNR/Hayes/Televiv. 32bit. 19.2kbud modems online!

The Total Access Board (206)472-9884 Tacoma Washington since 01/80. Sysop: Dick Fairchild. Using TBBS 2.2 with 2 lines on MS-DOS 80386 with 2300 MB storage. Supra at 19200 bps. \$10-\$50, 6, 12 mos fee. File areas: Windows, DOS, NT, Adult, many others. E-mail areas: Fidonet, Winnet, WinTNet, Adult, others. On-line games, chat, magazines, etc. Instant validation with VISA MasterCard. HST line at (206)474-7637. PC Pursuable. Call today!

FinComm (212)752-8660 New York New York since 09/87. Sysop: Alex Nason. Using Major BBS 6.02c with 11 lines on MS-DOS 80486 with 1000 MB storage. PPI at 14400 bps. \$49.95 Annual fee. FinComm: A financial BBS offering more than 10,000 daily closing quotes on NYSE, AMEX, NASDAQ stocks, futures, mutual funds. Financial news files, HISTORICAL DATA. Free trial

Computers & Dreams BBS (212)888-6565 New York New York since 01/91. Sysop: William P. Stewart. Using PCBoard 14.5a/E10 with 10 lines on MS-DOS 80486 with 2600 MB storage. U.S. Robotics at 28800 bps. No fee. New York City's BEST BBS! You don't deserve us? We'll call and find out for yourself. It's FREE. How can you go wrong? Dozens of GAMES, 1000s of Files, 1000s of GIFs, Prizes, RIME & ThroNet. PC Pursuable: NNNY. Soon to have Internet & CD-ROM. Call Now

The Antenna Network (215)757-3851 Hatboro Pennsylvania since 03/90. Sysop: Steve Ferguson. Using WildCat 3.52 with 5 lines on MS-DOS 80486 with 3600 MB storage. U.S. Robotics at 19200 bps. \$5 Monthly fee. The Philadelphia Area's Best BBS! Access is free, so give us a call Over 24,000 Files & 36,000 Messages from 6 National Networks Online. Many online games (some Multi-User Real Time). "The Best Game of Trade Wars in the 215 Area Code".

Round Table BBS (215)678-0818 Reading Pennsylvania since 03/90. Sysop: Dan McCoy. Using PCBoard 14.5a/E9 with 7 lines on MS-DOS 80386 with 2500 MB storage. U.S. Robotics at 14400 bps. \$20-\$55 Annual fee. FREE Two Week Access for ALL. 397+ E-Mail Conf on 7 Networks, Engineering, AutoCad, Windows plus 98,000 more files on every subject. 40 Megs new E-Mail & 35 Megs files added weekly. USA Today, ODMR & E-Mags online. Member USN and ASP.

PCBOARD BBS OPERATORS

Clark Development Company, Inc., developer of **PCBoard BBS** Software, has made a standing offer to pay **50%** of the cost of classified advertisements in Boardwatch Magazine placed by any BBS that notes their use of **PCBoard 14.5a** or later software. Your cost for an ad here: **\$12.50**

Newtown Express BBS (215)943-6806 Newtown Pennsylvania since 10/91. Sysop: Anthony Maglietta. Using PCBoard 14.5a with 10 lines on a high-speed LAN with 6000 MB storage. U.S. Robotics at 16.8K bps. \$20 Quarterly fee. 1200-16.8K Baud. The LARGEST selection of files in the area (PA, NJ, DE) The LARGEST selection of original adult GIFs in the area! Dedicated 386 and 486 nodes for fast, reliable service. Preview the adult GIFs BEFORE downloading! Call for details.

Electronic Dreams (215)356-8738 Westlake Ohio since 01/92. Sysop: Unknown. Using PCBoard 14.5a with 12 lines on MS-DOS 80386 with 813 MB storage. Twincom at 19200 bps. No fee. We offer a free, confidential, anonymous singles BBS. Our subscribers can run classified ads, exchange mail, upload stations about themselves and browse one another's photographs. Subscription includes free computer matching. Subs. by mail or online.

Bird Info Network/Colorado Connection (303)423-8775 Arvada Colorado since 12/91. Sysop: Terry Fune. Using TBBS 2.2M with 5 lines on MS-DOS 80386 with 500 MB storage. U.S. Robotics at 14400 bps. \$35 Annual fee. All about EXOTIC CAGE BIRDS! Breeding, Handfeeding, Keeping! Chat, 30+ Games, THREE CD ROMS, Usenet Newsgroups, Fido Echos, The Wild Side! Messages FREE!

The File Bank, Inc. (303)534-4646 Denver Colorado since 01/93. Sysop: Brian Bartee & Girard Westenberg. Using TBBS 2.2M with 16 lines on MS-DOS 80486 with 9999 MB storage. USR/Intell/Hayes at 14400 bps. \$5 Hourly fee. ASP Approved BBS & one of the finest collections of IBM- Compatible Shareware. Many free download areas including extensive libraries of Astronomy Software & Data files. Message Areas, Online Games, Chat. VISA, MC, AMEX, Discover Welcome. Voice: 534-4538

Pinecliff BBS (303)642-7463 Pinecliff Colorado since 01/82. Sysop: Craig Baker. Using Ultrabbs 2.09beta with 14 lines on MS-DOS 80386 with 9500 MB storage. U.S. Robotics at 14400 bps. No fee. Largest BBS in RockyMtn Area. FREE (\$20/yr gets 2hrs/day. \$100 Lifetime membership). \$60.00 zips. CD-Roms online. Games. Home of CDBREG - allows immediate upgrades with credit card. Sysop also runs a computer store. Night Owl C49. Come help us grow!

The Eagle's Nest BBS (303)933-0701 Littleton Colorado since 03/87. Sysop: Ron Olsen. Using QuickBBS with 1 line on MS-DOS 80386 with 675 MB storage. U.S. Robotics at 9600 bps. No fee. Winner in the 1992 Readers Choice contest. The BBS where every msg is answered personally by the Sysop. Give us a call. Many msg and file areas. Now carrying Genealogy file and message areas. "If it cost at the rest, come to the nest!"

Data Point (303)973-9454 Denver Colorado since 01/83. Sysop: Gary W Funk. Using TBBS 2.2M with 1 line on MS-DOS 80386 with 1100 MB storage. U.S. Robotics at 14400 bps. \$30 Annual fee. Online publications, and multi-player games. Large library of SDN, SDS, and TDN files. Support for MS-DOS, TBBS, TDMS, and TMail support. NetWork and FidoNet message areas.

Compulist Real Estate Service (303)735-5962 Fort Lauderdale Florida since 10/92. Sysop: Mark Stafford. Using WildCat 3.02 with 2 lines on MS-DOS 80386 with 200 MB storage. ZyXel at 14400 bps. No fee. View Real Estate ads online (NO FEE). Advertise your property online. Basic ad runs 6 months for only \$70.00. VOICE # (303)735-0483

CompuErotica (312)902-3599 Chicago Illinois since 07/84. Sysop: Tiger. Using NetLife with 11 lines on TT-030 with 200 MB storage. Supra at 2400 bps. \$45 Annual fee. If you like your chat hot, you'll love CompuErotica! Online Adult Lifestyle Conferences in chat, support files and bases, member-GIFs and more. Women receive FREE access after voice-verification. Large women's group. Come join the fun! Adults ONLY.

The Serial Port (312)286-0145 Clinton Twp, Michigan since 03/82. Sysop: Stu Jackson. Using TBBS 2.2M with 8 lines on MS-DOS 80486 with 6000 MB storage. ZyXel at 16.8bps. \$45 Annual fee. C'monby for a chat and a few files. THOUSANDS of Files with Adult sections available. Many on-line games. Call today for a FREE look around, or download our entire file list for your proofing at a later time. Visa/MC/Discover Welcome for INSTANT Upgrade

HAL 9000 BBS (313)663-4173 Ann Arbor Michigan since 03/88. Sysop: Victor R. Volkman. Using PCBoard 14.5a with 4 lines on MS-DOS 80386 with 1500 MB storage. Hayes at 14400 bps. \$20 Annual fee. Archives of all Association of Shareware Professionals (ASP) software on line. Large Softi GIF collection. Internet/Usenet e-mail and newsgroups from around the world. Special file areas devoted to Star Trek and The Prisoner TV shows and much more!

Meeting House BBS (401)48-2200 Portsmouth Rhode Island since 01/91. Sysop: John O'Donnell. Using Galacticom 5.31 with 13 lines on MS-DOS 80486 with 1100 MB storage. Supra at 9600 bps. \$75/Yearly fee. 6 CD ROMS Shareware for Apple, IBM, Commodore, Atari. Adult files. Networked through NE Telephone INFOPATH (32 ch.). Paid users issued a network userid. Live chat on 45 lines & via Public Data Network. Online games. Computer Research Services. MUCH MORE.

Late Nite (402)291-6164 Omaha Nebraska since 12/89. Sysop: John Patrick. Using PCBoard 14.5a with 10 lines on MS-DOS 80386 with 4700 MB storage. U.S. Robotics at 14400 bps. \$3 Monthly fee. GIFs (33,000+ HiRez Adult), ShareWare, OnLine Games and much more. Nebraska's #1 mature GIF source. Home of the L'Noxxinn GIF series!

Niteleg BBS (408)655-1096 Monterey California since 02/89. Sysop: Karl Van Lear. Using PCBoard 14.5a with 17 lines on MS-DOS 80486 with 4900 MB storage. U.S. Robotics at 14400 bps. \$18 Quarterly fee. DOS Windows OS2 & ADULT files. Email Conferences. Internet, Usenet, Rime, ILink. For v32bis call 655-8294. For USR HST call 655-8297. VISA, MasterCard, Discover & American Express accepted. Also check out Niteleg's online multiplayer games!

The Springfield Public Access BBS (413)536-4365 Springfield Massachusetts since 03/89. Sysop: Matthew de Jongh. Using TBBS 2.2 with 16 lines on MS-DOS 80486 with 7000 MB storage. U.S. Robotics at 19200 bps. No fee. 9 CD-ROMs Online All The Time! Over 80,000 Files, 200+ Message Areas with Over 50,000 Messages from FidoNet & ThroNet, QWK Reader with Unlimited Access! Multi-Player Online Games Including The Wild Side! (Adult Adventure) Over 1,000 Active Users!

SHARPENIT RBBS (413)786-4706 Agawam Massachusetts since 03/91. Sysop: Michael Scantlen. Using RBBS 17.00A with 2 lines on MS-DOS 80486 with 1000 MB storage. ZOOM VFX V24 V32 at 14400 bps. \$15.00 Annual fee. ASP APPROVED BBS Serving Small Business, and the Community Over 1 GB available with Low \$15/Year Membership. Basic Access to Game. Featuring Electronic Conferences, Theater Games, EMS-FIRE, Weather-Alert! Confirmer APOGEE NODE #500

The Lottery Exchange (416)398-5140 Toronto Ontario since 07/92. Sysop: Ed Koch. Using WildCat 3.55 with 1 line on MS-DOS 80386 with 1000 MB storage. ZyXel at 14400 bps. \$30.00 Annual fee. Specializing in lotteries from around the world. Official distributor of PC-LOTTO lottery program. Dealership inquiries welcome. All welcome for a FREE Look. VISA, M/C accepted. The ONLY BBS that can make you a MILLIONAIRE. CALL NOW. 7days, 24 hours.

Baudville BBS (416)283-0114 Toronto Ontario Canada since 03/92. Sysop: Ian Evans. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 2000 MB storage. U.S. Robotics at 14400 bps. \$36 Annual fee. 1200 Usenet areas. RIME, Internet, Nanet, C2C, Racenet, RF-Net, ThroNet, Mediatel, FidoNet. 2+ gigs of files. Over 2200+ conferences. Internet mail. Fido: 1250/304. The Economical Email Emporium. \$48 membership gets you \$185 in hw/sw coupons!

The U.S.A. BBS (501)753-8575 Little Rock Arkansas since 02/93. Sysop: Jeff Johnson. Using TBBS 2.2 with 16 lines on MS-DOS 80486 with 10000 MB storage. ATAT at 19200 bps. No fee. Most popular computers supported. DOS, Windows, & OS/2 files. Many games. One of the largest collections of Adult GIFs as well as scenic GIFs. Large adult area. Also many other sections including Religion, Kids, Business. Contests with v32bis modems

CyberScape (508)368-8456 Lancaster Massachusetts since 12/92. Sysop: Dave White. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 600 MB storage. U.S. Robotics at 19200 bps. \$24 Annual fee. Cyberscape offers "All the Best Shareware" Files are tested to ensure that we are bringing you only quality files with great descriptions! We post many new files each day, and each is selected for it's quality. Fees are optional!

Cul-de-Sac Bar & Grill (508)429-1784 Holliston Massachusetts since 03/85. Sysop: Pete White. Using TBBS 2.2M with 5 lines on MS-DOS 80286 with 380 MB storage. U.S. Robotics at 14400 bps. \$45 Annual fee. The home of many TBBS/TDBS software packages, and an almost continuous beta site for many TBBS/TDBS software authors. Like Ben Cunningham's 10,000 message system with full screen editing and quoting, and Jeff Johnson's On-Line Sales Manager.

MOONFLOWER (509)891-6789 Spokane Washington since 10/91. Sysop: Cunnus Shakti. Using VBBS 5.60 with 2 lines on MS-DOS 80486 with 2100 MB storage. ZyXel at 16800 bps. No fee. Free! (255/yr=1 hour & unlimited K/day) 15 Networks for the best in QWkable conferences & Email. Sex & conferences on: OS/2, Tech, Alternative Religions, Sex & Sexuality, Cyberspace, Politics, More. Nat. User Registry, 60 Games, Chat, Immed. access.

The Last Place On Earth (512)243-1949 North Babylon New York since 09/92. Sysop: Ken Oransky. Using Maxi-Mus 2.01 with 1 line on MS-DOS 80286 with 782 MB storage. U.S. Robotics at 14400 bps. \$15 Annual fee. 2.5 gigs of Adult files (650 MB on daily rotation). Includes graphics, animation, games, and text. Also, Adult Match Making and uncensored network conferences for all lifestyles. Free access to FidoNet and Shareware. We carry Star Trek DSN, TNG, and TOS.

LIFESTYLE CHAT WORLD (516)399-7195 Shirley New York since 01/93. Sysop: Jack Barber. Using Oracrom 7.H25 with 5 lines on MS-DOS 80386 with 40 MB storage. Cardinal at 2400 bps. \$20.00 Quarterly fee. Voice support on topics such as Political & Religious Views, Sports or anything else. You can place Personal Ads on the Singles World Board. Buy or Sell on our Classified Board, & enjoy CHATTING with our members, with out getting down and dirty.

America's Suggestion Box (ASB) (516)471-8625 Ronkonkoma New York since 02/92. Sysop: Joe Jerszynski. Using BBS 5.2M with 3 lines on MS-DOS 80486 with 2200 MB storage. U.S. Robotics at 14400 bps. No fee. 13000+ files, ASP approved with a rapidly expanding filebase, Boardwatch, USA Today, ODMR, Video Online. Would you like to see a computer product or service improved? Come see why you and ASB can make a difference! Generous access time & download priv.

House Of Files BBS (516)938-6722 Hicksville New York since 08/85. Sysop: Jim Torro. Using TBBS 2.2 with 32 lines on MS-DOS 80486 with 9900 MB storage. Supra at 19200 bps. \$50.00 Annual fee. Largest file system in New York. Over 100,000 files ALWAYS online. Over 10,000 music files, 1000 public domain clip art files ad tens of thousands of others. Call us and find out why hundreds of syops subscribe to our system. Browse around for free!

Wolverine (517)631-3471 Midland Michigan since 07/88. Sysop: Rick Rosinski. Using Searchlight 2.50 with 4 lines on MS-DOS 80486 with 6000 MB storage. U.S. Robotics at 19200 bps. \$35 Annual fee. Mid-Michigan's Largest BBS with over 60,000 files & NINE CD-ROM's! Special support for Windows/DES/View/Music/Games/Amiga/Mac. Now the Official Support BBS for SkyGlobe. ASP Approved/Modem News/Stand/Apple Distribution Site #1038.

The Adult File Cabinet BBS (517)792-4680 Saginaw, Michigan since 01/91. Sysop: Ronald Gage. Using PCBoard 14.5a with 2 lines on MS-DOS 80386 with 2600 MB storage. U.S. Robotics at 14400 bps. \$30.00 Annual fee. Large Adult BBS. VISA/MC subscription (\$5.00 surcharge). File trades available, friendly operator and atmosphere. 90 minutes a day for subscribers, no download limits or ratios to bother with. Color scanning available. INTELEC Mail Network available.

Somewhere Out There (602)838-9707 Phoenix Arizona since 02/93. Sysop: Jeff Wolke. Using Coconut 3.3c with 8 lines on UNIX with 650 MB storage. ZyXel at 14400 bps. \$30 Hourly fee. Somewhere out there is a place where people find each other. Unique COCONET-based graphical BBS for singles. Personal ads, chat, public meetings, special support groups for newly single, single parents, senior dating, etc. Anonymous and private. Try us!

AIS Multitell (604)489-4206 Cranbrook, BC Canada since 03/89. Sysop: Chris Pinnell. Using Galacticom 6.03 with 4 lines on MS-DOS 80386 with 1200 MB storage. U.S. Robotics at 16800 bps. \$5.00 Monthly fee. One of the fastest growing BBSes in the B.C., we have a wide range of services to offer, including 2 CD-ROMs drive, over 1 Gb to download, with a large ADULT FILE LIBRARY! Free time on first call, only \$5 for 1 month!!

ASA CompuHeb BBS (614)476-4058 Columbus Ohio since 05/92. Sysop: Jeff Binkley. Using PCBoard 14.5a with 4 lines on MS-DOS 80486 with 1800 MB storage. Hayes at 14400 bps. \$30.00 Annual fee. Central Ohio's fastest growing BBS! FidoNet, SportsNet, StormNet, Usenet News Groups, Internet E-mail, CD-ROM drives, and more! Regular games and contests with plenty of giveaways. Known for our great newsletter and outstanding technical support!

The 3rd Eye Electronic Erotic Magazine (512)227-6155 Nashville Tennessee since 05/86. Sysop: Michael Vetter. Using TBBS 2.2M with 6 lines on MS-DOS 80486 with 1000 MB storage. Hayes at 9600 bps. \$30 Annual fee. A friendly gathering place for couples and singles with an interest in the swinging lifestyle. Personal ads (all lifestyles), digitized photos of members, online chat, adult discussions, club information, Unique echos, lifestyle support, multiuser games.

Sounds Of Silence (615)449-5969 Nashville Tennessee since 07/92. Sysop: Jim Walton. Using Galacticom 6.02 with 32 lines on MS-DOS 80486 with 1300 MB storage. Practical Peripheral at 14400 bps. \$510 Monthly fee. Great "Live" Chat and Entertainment System. Games, 12 Gigs of files, forums, classifieds, 24 hour access, dating services, E-Mail, WATTS line, credit card and 900 billing, 32 high speed lines. Online fortune telling. An interesting system.

8GB-Rose and Crown BBS (518)92-0097 Chattanooga Tennessee since 06/85. Sysop: David Ellison. Using PCBoard 14.5a with 4 lines on MS-DOS 80486 with 9000 MB storage. U.S. Robotics at 14400 bps. \$30.00 Annual fee. Free 30 minutes per day with 24 hour access, dating services, discouraged, 11 CDROM on file. Echomail. System runs on fully cached 486/386 computers with no multitasking so it's very responsive. Over 100,000 files. Busy system. No X-rated.

The White Zone BBS (617)969-3138 Newton Massachusetts since 10/90. Sysop: David Sagany. Using TBBS 2.2M with 8 lines on MS-DOS 80386 with 2700 MB storage. U.S. Robotics at 16.8k bps. \$15-75 Optional fee. 1.7 GB of IBM MS-DOS Shareware, Adult Graphics, Midi & Soundcard Files, Flight Simulator, Geoworks, Windows, WazWare & More! Online Games, Classified Ads, BBS Listings, QWIK Offline Mail Reader Support & PC Catalog on-line! ASP Approved BBS

The Advanced System BBS (702)334-3317 Reno Nevada since 04/82. Sysop: Alan McKeown. Using TBBS 2.2M with 32 lines on MS-DOS 80486 with 11000 MB storage. Supra at 14400 bps. \$5 Monthly fee. The Advanced System was started to see how far BBS technology could be pushed. With over 50000 files online and some of the most advanced features of any BBS we support both adult and general access levels. With 19 of the TOP TBBS 3rd party dev. its HOT!

Public Access Information Service (702)383-9939 Las Vegas Nevada since 01/87. Sysop: Rick Cross. Using WildCat 3.55P with 11 lines on MS-DOS 80486 with 8000 MB storage. Supra at 14400 bps. \$10 Monthly fee. Largest BBS in Nevada! "We Got It ALL." All lines High Speed, FST, HayesV, Xzsl, and V.32bis. 16 CD-ROMs online, IBM-DOS, Windows, Ose2, & Amiga. ASP Approved R98. Full time Professional Staff. Visa/MC online subscriptions as low as \$10.

Mirage Network-VA/The Coral Reefer BBS (703)264-3662 Herndon Virginia since 10/90. Sysop: Tully Marks. Using GAP 6M/59 with 5 lines on MS-DOS 80386 with 1200 MB storage. U.S. Robotics at 38400 bps. \$29+ 1mo-4yrs fee. GIFs & Animations for discriminating Adults. Scanning Services Available. 16550 chips, hard drives, monitors, modems, etc for sale. Online subscriptions 1st call w/VISA or MC. Home of "FUD" section! D.L. CORALREF.EXE for offline registrations.

COMONE (708)717-9370 Naperville Illinois since 05/92. Sysop: Craig Wells. Using Falken v6.5 with 4 lines on MS-DOS 80386 with 2300 MB storage. Income at 2400 bps. \$Fee Varies fee. GVC 9600 V.32 708-717-9379 Windows 3.x, large music section. Files By Mail service. It's worth downloading, we've got it. ASP Approved BBS. "THE SECURITY OF A DISK VENDOR AT BBS PRICES!". No Adult files. Tired of supporting x-rated BBS? call us.

Chicago Syslink (708)795-4442 Berwyn Illinois since 06/81. Sysop: George Matyaszek. Using TBBS 2.2M with 9 lines on MS-DOS 80386 with 800 MB storage. Intel at 14400 bps. \$20 Annual fee. CD-ROM means 6,000-12,000 new files available every week! Catering to callers in the 25+ age group, we offer MicroMatch-Find-A-Friend, 60+ Online Games, Online Magazines including Bell Business Report. There's something for everyone! Call Today!

The Liberty BBS (714)996-7777 Anaheim Hills California since 07/92. Sysop: John Galt. Using Major BBS 6.03 with 42 lines on MS-DOS 80486 with 5420 MB storage. ZyXel at 16800bps. \$10 Monthly fee. PC-Pursuitable at D/CASAN/24 ATDT9967777. local access numbers from many southern Calif locations listed online, instant access with \$10 charge to VISA, Mastercard, or 900 number. Nationwide Chat, E-mail & Forums, Games, 7 CD-ROMs, & online news.

The Earth Art (tm) BBS (803)552-4389 North Charleston, South Carolina since 12/91. Sysop: Bob Chapman. Using PCBoard 14.5a/10 with 3 lines on MS-DOS 80486 with 927 MB storage. U.S. Robotics at 19200 bps. No fee. Home Of GreenNet, The International Duck Stamp Print Exchange & World's First REAL Online Wildlife Art Gallery! Host Board For RIME OUTDOORS Conference. Using 9600 Baud Satellite Dish Downlink & Uplink Gateway! Reviewed in 11/92 BW! Call Us RIGHT NOW!

CLASS ACT BBS (806)379-7868 Amarillo Texas since 12/92. Sysop: Dan DeArmond. Using WildCat 3.55 with 1 line on MS-DOS 80386 with 500 MB storage. Practical Model at 14400 bps. \$10.00 Quarterly fee. Thousands of files on line. Huge Adult Section. Personal ads, all lifestyles welcome. Home grown Adult, GIF files. Dating Forum Conference, Doors, BBS Lister, Apogee game distributor. Large friendly message base, family oriented or adult.

InfoMarket Express (800)879-7209 Chester New Jersey since 01/93. Sysop: Edward Brzezowski. Using PCBoard 14.5a with 3 lines on MS-DOS 80486 with 400 MB storage. Hayes at 14400 bps. No fee. InfoMarket Express - Where information is bought and sold online. Free access, no subscription or registration fees. Providers make money when their files are sold. Please note that 908 is a new area code in NJ and not a 900#.

Legend Graphics Online (909)89-9229 Riverside California since 11/91. Sysop: Joe Marquez. Using PCBoard 14.5a with 6 lines on MS-DOS 80486 with THSD MB storage. U.S. Robotics at 16800 bps. \$10 Monthly fee. Nations One-Stop Graphics BBS! You will be impressed! Huge Adults Only file areas. Simply the BEST in Southern California Adult and look for yourself. Visa/MasterCard/AmEx/Optima accepted.

Career Decisions BBS (909)864-8287 Highland California since 11/92. Sysop: Ralph Schlender. Using WildCat 3.52 with 1 line on MS-DOS 80386 with 107 MB storage. ZyXel at 14400 bps. No fee. If you are Job Hunting, be sure to give us a call. Job Ads, Recruiter Directory, Resume Services, Book Reviews, Job Profiles, Salaries, Relocation Tips, related shareware, and more. New features being added daily. Free Access.

STB 4-COM Card \$110

Each port independently configurable by jumpers for addresses:
h3F8, h2F8, h3E8, h2E8, h1F8, h1E8, h1A8, h2A8 and for IRQs 15, 12, 11, 10, 5, 4, 3, 2
Full 16 byte 16550 FIFO buffering on each Port (16554 Chip).

4 port, 16 bit, serial I/O card, Provides 4 high performance RS-232C Asynchronous Serial Communications Ports. Each on a separate IRQ or Allows sharing one or more IRQs.

U.S. Robotics Authorized Reseller

USR Sportster V.32bis FAX/V.17 Modem

Internal - \$199 External - \$225

*MAC & Fax - \$249

USR Courier 14400 V.32bis FAX Modem

Internal - \$395 External - \$439

USR 16800 Dual Standard FAX Modem

Internal - \$679 External - \$729

Send Check or Money Order in U.S. Dollars

NC Residents add 6% sales tax

to: PreRapture Solutions

1806 Albany St. Durham, NC 27705-3134







1-800-SELLCOM (735-5266) Ext. 29 orders only

Outside U.S. Call: 919-286-1602 Ext. 40

Visa & Mastercard *Price includes UPS or US Mail Shipping to United States

THE FILE BANK

"HUNDREDS of THOUSANDS of FILES!"

-  Thousands of Quality Downloads
-  Interesting Message Areas
-  User Chat
-  Instant Online Registration
-  Extensive Adult Areas
-  Online Games

AND MUCH MORE!

Call Today!

(303) 534-4646

ALL MAJOR CREDIT CARDS ACCEPTED



ADULT/SHAREWARE CD - ROMS

*Ecstasy Hot Pics \$59	24 hrs \$59	*Sextasy Busty Babes \$59
*Erotic Encounters \$59	7 days \$59	*So Much Shareware \$59
*GBL 1 (gay, bi-sexual) \$59		*Storm 1, 2, 3 \$39, \$49, \$59
*My Prvt. Collec. 1 or 2 \$59		*Visual Fantasies \$59
*Nix Pix Hot Pix 1 \$59	Vista \$59	*Night Owl 7, 8 \$39, \$49
*Nix Pix Hot Pix 2, 3 or 4 \$69	MC \$59	*Shwre. Extravaganza (4 CDs) \$79
*PC Pix 1, 2 or 3 \$59	Amex \$59	*Shareware Studio \$49
*Pixure ROM Trp (3CDs) \$119	COD \$59	*Shareware Tiger \$49
*Seedy Rom 6 Pack \$199	Check \$59	*So Much Shareware 2 \$49
*Seedy Rom 7th Heaven \$49	Money \$59	

Free Shipping, Next Day, Air Mail, WORLDWIDE

Box 5107 Mentor Ohio 44061

(216) 254-2609 Voice

(216) 254-1206 Fax

*MUST State

age Over 21

Goosebump Graphics

STOP VIRUSES FAST

TRANSCAN™ V4+

"The Premium File Scanner and Converter!"

TranScan extracts files of ALL types for Virus Scanning by ANY Scanner and Converts files to a default method. TranScan works with ALL BBS systems complete with COM output. Files can be tested for Integrity, Viruses, Age or Date, GIF Integrity & Resolution and more. Save \$5 off \$30 registration by mentioning this Ad.

To order call Toll Free

1-800-578-3061

or call TranScan BBS

913-266-0781



Association of
Shareware
Professionals



Channel 1® wins
1992 Dvorak/Zoom
1st Annual Award
for Best General BBS

Over 2,500,000 calls!

617-354-7077 2400/1200

617-354-5776 14.4 v.32bis

PO Box 338, Cambridge, MA 02238

16 Gigs/PC Pursuit/Compucom/Teletbit/HST 16.8



The Meeting House BBS

(401) 848-2200 Newport

(401) 751-1606 Providence

(401) 624-8744 Tiverton & Fall River MA



300-9600 baud 8-N-1
13 lines & growing
over 50,000 files available

Online MALL
Active CHAT membership
Multi-player Arcade style games

55,000 CDs ON-LINE

WORLD'S LARGEST ON-LINE
AUDIO COMPACT DISC STORE

DISCOUNT PRICES • FAST DELIVERY
FREE SHIPPING FOR ORDERS OF \$100 OR MORE

Modem: 408-730-9015
Up to 9600 bps 8-N-1
In Chicago: 312-751-2447
In New York: 212-532-4045
1016 E. El Camino #322, Sunnyvale, CA 94087
Voice & Fax: 408-733-0801

COMPACT DISC CONNECTION

Talk dirty on the...

Lifestyle B.B.S.

- Where Couples & Singles meet!!
- Swinging/B&D/S&M/Bi/TV/Fetishes
- The hottest CHAT BBS in the U.S.
- Personal Questionnaires • Hot erotic stories
- 900+ calls/day with over 1,000 active members



Modem: (516) 689-5390 • A 33 line Oracom system

Run Your Own Chat BBS!

With DLX software, it's fun and easy to have your own social board. Some do it as a hobby, some make a living from it. Both group chat & one-on-one chatting. Up to 32 telephone lines with one PC. Email and downloading, too.



For DLX info:

818-894-4150



PUT NEWSBYTES ON YOUR BBS

Twice Weekly Computer News

Starting at...

\$25.00

Call Gary Funk

(303)973-6038

PCB-UUCP

Finally a full-featured affordable Internet/USENET gateway for your PCBoard system. PCB-UUCP handles Private Internet Mail, USENET Newsgroups, BitNet Mailing Lists, plus an awesome array of other features.

- File attachments
- Seamless replies
- User notification of new mail
- Create your own newsgroup or mailing list
- LISTSERV function for both mailing lists (SUB/UNSUB) and files (GET/LIST)
- Powerful setup & install programs
- Redistribution of newsgroups and mail to down-stream systems
- Archiving of newsgroups
- Handles moderated and read-only newsgroups
- Message blocking
- Fully network compatible
- Plus much, much more!



Merlin
Systems

Merlin Systems, Inc.
P.O. Box 3043, Station C, Ottawa, Ontario K1Y 4J3
Internet: info@merlin-systems.on.ca
FidoNet: info 1:163/509
MHS: info@merlin

Voice: (613)236-1138
Fax & BBS: (613)236-1481

BBS INCOME

Free Report on how to go from \$0 to \$3,000 per month in BBS income in as little as 90 days!

This valuable report reveals money making information on how to operate a BBS for profit. It outlines powerful marketing secrets including unique ways of finding new subscribers and how to get them to pay you top dollar; guaranteed ways to generate other revenue plus the secrets to getting free publicity and being able to accept credit card payments; plus much more. Limited quantity.

BBS Marketing
56089 29 Palms Hwy. Ste 254-B
Yuca Valley, CA 92284
1 (619) 228-9653
FAX 1 (619) 369-1185

Prepared by the publishers of The BBS Marketing Newsletter - the quarterly newsletter for Sysops.

WIN A US ROBOTICS 16.8 DUAL STANDARD MODEM!

IN FACT, WE'RE GIVING AWAY ONE EACH MONTH!*

That's right, This is your chance to own one of the finest modems on the market today. The good folks at DATABANK are making this offer to introduce you to one of the fastest growing boards in the country and at the same time give you a chance to own that modem that you have been dreaming about.

We Offer What You Are Looking For...

- CD-Roms (Complete Systems, Hardware, Software, Low Prices)
- USA Today
- Boardwatch Magazine
- BBS Callers Digest
- Newsbytes
- Closing Stocks
- Games
- Chat

featuring...

On-Line Shopping

12.5 Gigs...AND STILL GROWING!

*Offer void where prohibited by law

913-842-7744

DataBank
You Will Find it ALL Here...YOU CAN BANK ON IT

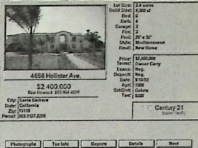
On-Line Photograph Database



Auto Seller



Contact Phonebook



Residential Real Estate

Create Powerful On-Line Databases!

Durand Communications has developed the first full featured on-line photograph database based on Galacticom's Major BBS and the Major Database. Now you can create your own powerful image viewing databases using our DC NET Photograph Database and the DC Terminal program. Create your own multi-line database application or use one of our turn-key applications to provide complete database services with on-line photographs, powerful search parameters and much more. RIPScrip GUI mouse driven front-end available soon. Call now for information or call our Demo BBS and download the DC Terminal program.

Product Applications

Real Estate
Video Catalog
Car Sales
Contact Phonebook
Much More...

WEST COAST
Tel: 805-964-4899
Fax: 805-683-7690
BBS: 805-964-2833
5276 Hollister Ave., #405
Santa Barbara, CA 93111

EAST COAST
Fax: 703-525-9636
4601 N. Fairfax Dr., #1130
Arlington, VA 22203

FREE ACCESS

Never a charge! Never a charge!

Dial into America's newest and hottest BBS.

Totally unbeatable one-on-one and partyline action.

62 lines! Major BBS V6.0
Exciting graphics and the best downloads anywhere.

Also mega shareware files, multi-user games, sizzling gif files and hot message forms.

Make your modem smoke!
Call Now!



1-715-758-1000

★ MODEMS ★ VIDEO BOARDS

2400 Int/Ext Modem w/Software	\$40/70
Cardinal External 2400 Modem/Fax w/Flashlink MNP 5 Software	\$90
USR 9600/2400 S/R/Fax-Modem w/V.42 & MNP 5	\$179
Practical Peripherals 9600SA Ext. V.32/42BIS - 38400, MNP 5	\$299
USR 9600/16800 Ext HST Fax-Modem w/V.42 MNP 1-5 Error Correction	\$649
Cardinal Ext 9600 V.32 Modem w/V.42BIS, MNP 1-5, & Quicklink	\$259
Cardinal Int 9600 V.32 Modem w/V.42BIS, MNP 5, & Quicklink	\$224
ZyXEL U-1496 16.8 Fax-Modem thru V.42BIS HST, MNP 5, Password Protection, Caller ID, Grr 5 Fax, & 5-Year Warranty. Call For Details!	\$599
Trident 8900C 1 MB SVGA 1024x768	\$89
Diamond SpeedStar 24X 1 MB	\$179
Diamond Stealth VRAM 1 MB	\$249
Number9 GXITG Level 29 True Color	\$1639
ATI Graphics ULTRA 1 MB OEM	\$269
ATI Graphics ULTRA Pro 2 MB	\$569
Matrox Studio & Video Line	CALL
High Speed 16550 Serial/Parallel Card	CALL
Custom Systems Based On AMI Motherboards both ISA & EISA. Coming Soon VESA Local Bus. We Build BBS Systems	

Pixel Perfect Systems

Hours M - F 9 AM - 5 PM Pacific Time
(909) 860-2494 860-8515 FAX
Since 1988 CIS 72057,3535

Prices Subject To Change Without Notice 1292

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ON-LINE INFORMATION SERVICES - MAY, 1993

[illegible]

BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARDS AND ON-LINE INFORMATION SERVICES - MAY, 1993

PHONE	DESCRIPTION	SPONSOR/SYSP	LOCATION
(412)846-5312	Support for Second Sight BBS Software for Macintosh	Jeff Dripps/FreeSoft Company	Beaver Falls, PA
(303)526-2219	Mac System Software distributor, mail, sigs, files	Patricia O'Connor	Golden, CO
(303)758-3755	Largest MAC BBS on East Coast	Harvey Yount	Norfolk, VA
(212)420-0627	Support/Demo System for Magpie BBS Conferencing Software	Neville Marples	Norfolk, VA
(209)838-2402	Macintosh BBS - email, very easy to use	John McAfee/CVIA	San Ramon, CA
(212)373-6932	Meeting/terminal/convention planning information	John Mackenzie	San Jose, CA
(212)831-9280	32 line DLX with City Guide/ST Database - Matchmaker - Chat	Bruce Kamm/Metro Online Services	New York, NY
(415)558-0309	2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software	New York City, NY
(919)778-6674	USA Today/Boxoffice Magazine Software Source - Boardwatch	Michael Stroud	San Jose, CA
(206)646-9836	Support for Popular R-Base Relational Data Base System	Micro Tech	Rapide Grande, WA
(508)975-7355	Windows 3.11 BBS with support for DOS	Microscopic Corporation	Rapide Grande, WA
(212)868-0730	Internet Access, E-Mail, Newsgroups, Irtelnet	MSI - Reed Lewis	Bellevue, WA
(212)868-0730	Internet Access, E-Mail, Newsgroups, Irtelnet	Phantom Access Technologies	Bellevue, WA
(612)820-5568	Minnesota Space Frontier Society - NASA News	Ben Husset	New York, NY
(818)366-1238	5 Lines - 8 Networks CD-ROMS - 2.8 GB Hub Services HSTV 32	Tom Tompkins	Granada Hills, CA
(703)427-0226	Adult Based BBS	Edward Lee Wood, Jr.	Carrollton, KY
(718)838-5462	Movie Reviews and Information - Television	National Assoc. of Cave Divers	Gainesville, FL
(614)895-2553	Caribbean HAM Radio/AMSAT Unit System	Gary Sanders	Westerville, OH
(614)895-2553	NAPIS Graphics Terminal and Editor Software	MicroStar Corp.	Nepaul, Ontario
(613)727-5272	NASA Educational Affairs Div. - Flight Data/Space History	Marshall Space Flight Center	Huntsville, AL
(205)895-0728	12 line TBBS - Games/TDBS Software Development 1.8 GB	Ben Cunningham	Nashville, TN
(615)383-0271	Family History - Genealogical Research - Gravestone Haunting	National Genealogical Society	Nashville, TN
(703)528-2612	Learn the World's Languages and the quickest way to learn for info.	World Language Services	San Jose, CA
(508)620-1170	Internet WWW Sites and The quickest way to learn for info.	Network World Magazine/CW Communications	Framingham, MA
(303)494-1763	Automated Computer GIF Graphics Images - Sync PC to PBS Time	Nat. Institute for Standards/Technology	Boulder, CO
(303)494-1763	Large Library of Adult GIF Graphics Images	Nick De Wolf	Aspen, CO
(303)497-5042	Home of PAK archieve utility	National Oceanographic Atmospheric Admin	Boulder, CO
(615)630-3392	Collecting of Coins, Medals, and Exonumia	Mike Neuhaus/Gus Smedstad	Grand Rapids, MI
(301)488-8205	Quality Bulletin Board List - ABBS	The Mitchell Group	Aurora, MD
(408)827-2662	Quality Bulletin Board List - ABBS	Robert Orr/Online Atlanta Society	Decatur, GA
(212)385-2034	Job Safety Issues for Artists, Musicians, Entertainers	Mike McCann/Center for Safety in Arts	New York, NY
(818)358-6968	Adult Multiline Chat System - Games - Magazines - Downloads	US Department of Education	Monrovia, CA
(202)222-4922	Educational Statistics and Data - Performance Stats -	Dave Hughes	Washington, D.C.
(719)632-4111	Canada's shareware house is online now	Gary Walsh/Tom Haavisto	Colorado Springs, CO
(807)345-5522	Shareware Public Domain Software SIGS/Support	Digital Computer Products	Thunder Bay, Ontario
(807)345-5522	Shareware Public Domain Software SIGS/Support	Digital Computer Products	Thunder Bay, Ontario
(619)346-1608	Sales and Support for Onecomm Multiline BBS Software	Surf Computer Services	Parkersburg, South Australia
(301)869-9036	Birdwatching, Bird feeding, Naturalist/Ecology issues	Frank and Norm Saunders	Rancho Mirage, CA
(561)381-3142	Boardwatch-USA Today-Internet-Usenet-RIME	Mike Mathews	Coleville, MD
(518)339-6722	Home of The 181 National BBS List	James Toro	New Orleans, LA
(813)874-3078	Packard Radio Equipment Supplier - TNC/PSK Modems	Gwyn Reedy/PacComm Inc.	Hicksville, NY
(216)391-3320	Shareware library with 100% USR HT access - 24 lines	Norm Henke	Tampa, FL
(415)435-1963	Physics and Astronomical Sciences	University of Illinois	Cleveland, OH
(415)435-1963	Physics and Astronomical Sciences	University of Illinois	Urbana, IL
(303)942-7465	Support for Sapphire BBS Software	Crak Baker	Pinetree, CO
(414)354-8654	Home of PKZIP 1.10 Compression Utility	Timothy Campbell/Pinnacle Software	Montreal, Quebec
(805)460-5878	Sexually Explicit Fantasy Chat System - Adults only	Practical Peripherals	West Lake Village, CA
(805)460-4445	Support BBS for Practical Peripherals Modems	Tim Smith/DataStream Technologies Inc.	Chattanooga, MO
(314)875-0503	Home of ProComm 2.4.3 and ProComm Plus Comm Programs	Tony Brown/Computer Solutions	Columbia, WI
(314)875-0503	Home of ProComm 2.4.3 and ProComm Plus Comm Programs	Tony Brown/Computer Solutions	Columbia, WI
(615)474-2038	64-line System with \$2,500/hour Local Access	Mark (Slovak) Herring	Granatons, TN
(503)474-6662	Support for QMail, Delphi and 1stLevel, offline mail utils		

[illegible]

Copyright 1993, Jack Rickard - All rights reserved

Attention TBBS Sysops!

Allow your callers to send and receive electronic mail to Compuserve, GENIE, America Online, And hundreds of other hosts connected to the Internet...

Announcing *Jack Rickard's*

Personal Internet Mail Processor (PIMP)

Option Module Version for TBBS V2.2

True 100% assembly language TBBS option module loads with your BBS to process inbound and outbound UUCP mail files continuously without ever taking your BBS offline to process mail.

- Supports both FSUUCP and WAFFLE UUCICO program file formats
- Inbound/Outbound file attachments.
- Bounce messages notify sender if no userlog entry matches inbound address
- Inbound Aliasing to redirect messages
- Semaphore directory contention for use with connected "nanny" mail machines

Your callers deal with Internet mail using all the features of the existing TBBS message system - replies, searches, message scan, forward, file attachments, message waiting que, .QWK offline mail readers (requires eSoft's QSO option module). PIMP makes global electronic mail easy for your callers to deal with - and easy for your system to actually transmit Internet mail messages within one minute after they are entered on your BBS.

Let PIMP connect your TBBS system to the world!

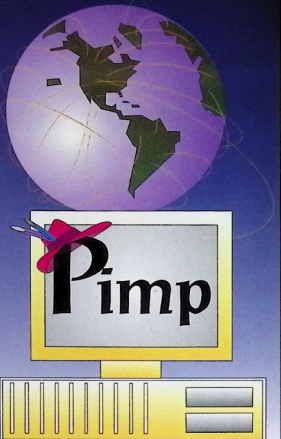
PIMP for TBBS - Option Module Version - \$179.00 visa/mc accepted

Copyright 1992, Jack Rickard

For more information or to order, Call Boardwatch Magazine at:

(303) 973-6038 voice, (303) 986-8754 fax, (303) 973-4222 BBS

*TBBS is a trademark of eSoft, Inc.



Personal Internet Mail Processor

PCBoard Sysops!

Now your callers can read USA Today online each morning with the...

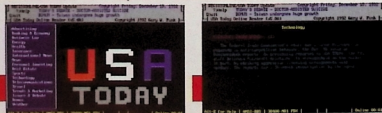
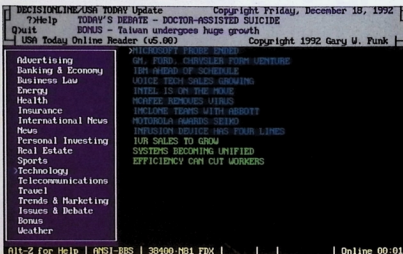
USA Today Door for PCBoard

Beautiful full color ANSI screens allow callers easy cursor control selection of topical categories and individual stories. Colorized text is easy to read. This easy to install door makes your BBS look professional and current with a major daily newspaper online each morning. Supports both ANSI and ASCII callers. Written specifically for PCBoard. Now you can easily display this popular online text service.

Too see the USA Today Door for PCBoard online, dial the Aquila PCBoard BBS at: (708) 820-8344

To order the USA Today Door for PCBoard at just \$99, contact Gary Funk, Boardwatch Magazine, (303) 973-6038

Call Today!



USA TODAY DECISIONLINE



ONLINE TEXT PERIODICALS FOR YOUR BBS

Gannett New Media's USA Today Newspaper is the only truly national general newspaper in publication. Now you can provide your callers with the most concise, readable, and informative online morning summary of the days events with USA Today Decisionline.

USA Today Decisionline provides news on eighteen topical categories designed specifically for screen viewing and available online by 8:00 AM on your BBS each and every business day. Averaging 65KB daily in compressed .ZIP format, USATODAY.ZIP contains eighteen topical files of ASCII text perfect for display on your system with a minimum of maintenance. Our multiline system allows you to retrieve the day's news in less than a minute using 14,400 bps V.32bis modems.

Priced at only \$3 per line per month (\$25 minimum) billed semi-annually.

Easy to Automate!...Low Maintenance

Features

- | | | | |
|----------------------|----------------------|---------------------------|-------------------------|
| ■ Advertising | ■ Marketing Trends | ■ Weather | ■ Insurance |
| ■ Real Estate | ■ USA News | ■ Personal Investing | ■ Travel |
| ■ Health | ■ Energy | ■ Banking and the Economy | ■ Business Law |
| ■ Telecommunications | ■ Technology | ■ Sports | ■ Special Bonus reports |
| ■ Issues and Debates | ■ International News | | |

BOARDWATCH MAGAZINE Online Edition

The number one topic of discussion online is STILL how to put your modem into play to find out who has information, and what to do with it once it's yours.

And since March 1987, BOARDWATCH MAGAZINE has consistently been THE publication BBS operators and callers alike look to for news and answers regarding their favorite sport - online communications.

BOARDWATCH reviews books, hardware, software, and services that enable you to communicate with others, find information, locate hard to find software titles at a very low or no cost, and play a part in a new electronic frontier.

Put the best information the online world has to offer on your caller's screen.



Put USA TODAY
on your system for as little as

\$25
per month



BOARDWATCH ONLINE is available at a quarterly rate of just \$75 or an annual rate of \$250.

TO SUBSCRIBE CALL TODAY...(303) 973-6038 (voice)

TO SEE THESE PRODUCTS, CALL OUR ONLINE INFORMATION SERVICE AT:
(303) 973-4222 (V.32bis)

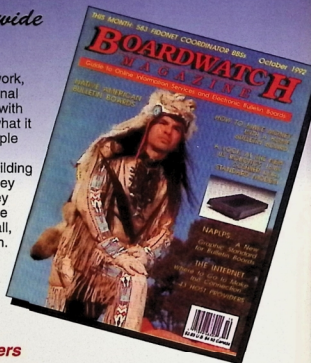
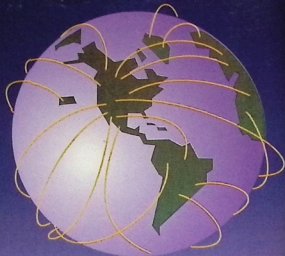
BOARDWATCH MAGAZINE

Guide to Online Information Services and Electronic Bulletin Boards

Connect Your PC to the World...

*More Than 70,000 Bulletin Boards Worldwide
Await Your Call!*

It's a new world out there. Thousands of individuals re-creating the way we live, work, play, and communicate using a fascinating new technology to connect their personal computers in the night. And each month since 1987, Boardwatch has been there with the latest in who's doing it, how they did it, why anyone would want to do it, and what it might mean in the future. Find out about a new cottage industry thousands of people are leaving corporate America forever to join as independent BBS operators and online information workers in a new information economy. The people who are building the tools for this new industry read Boardwatch every month — so should you. They know about dozens of fascinating, free, government-run information services. They learn about software and hardware developments that drive the advances in online technology. They know who the movers and shakers are in the industry. Most of all, they get information they need to be a part of it — and they get it from Boardwatch.



National Listings

Local Area Lists

List of BBS List Keepers

Short on theory and long on facts, access numbers, and contact information, Boardwatch delivers stories on the global Internet, commercial online services, and bulletin boards — you can dial immediately with your modem. Each issue brings you 500 to 1000 access numbers under topical lists, geographic lists, and our own select national list of bulletin boards. More, we list the people who keep lists in various cities, and under various topics, all over the world, so that you can dial and download the latest lists of bulletin boards from their source. Nobody digs out more numbers and more bulletin boards than Boardwatch Magazine.

MAKE THE CONNECTION TODAY!

Name: _____
Street Address: _____
City: _____ State: _____ Zip: _____
Logon Name: _____ Password (8 Chars max) _____
MC/VISA # _____ Expires: _____

U.S., Canada, Mexico

- | | |
|---|--|
| <input type="checkbox"/> One Year Printed Magazine - \$36 | <input type="checkbox"/> One Year Magazine AND BBS Access - \$60 |
| <input type="checkbox"/> Two Year Printed Magazine - \$59 | <input type="checkbox"/> Two Year Magazine AND BBS Access - \$89 |
| <input type="checkbox"/> One Year Overseas - BBS Access Included - \$99 | |

To Subscribe Call or Write:

BOARDWATCH MAGAZINE

7586 West Jewell Ave., Suite 200

Lakewood Colorado 80232

(800)933-6038 Subscription Only

(303)973-4222 Data

(303)986-8754 Fax

BOARDWATCH MAGAZINE

Is Pleased to Announce...

THE ONE BBSCON '93

AUGUST 25-29, 1993

BROADMOOR HOTEL, COLORADO SPRINGS, COLORADO



Don't miss the largest gathering of BBS operators and industry leaders ever assembled. Come meet the pioneers that started the online movement, and the leaders of today's online industry in an intense three-day educational conference covering every aspect of the online world. ONE BBSCON '93 promises to be THE online event of the year - in the shadow of the beautiful Rocky Mountain front range at its most beautiful time of year. Nowhere else will you ever have the opportunity to see as many BBS products in action, talk to the vendors, compare BBS software side-by-side, find the latest in utility programs, modem technology, and see up close virtually every aspect of communicating online with personal computers. Nowhere else will you find such a presentation of technical information you can use to run your own online information service. And nowhere will you find as many BBS operators from around the world gathered under one roof to share experiences, trade war stories, and rub elbows with the stars of the industry.

ONE Inc. Online Networking Expositions

President, Jack Rickard

Secretary/Treasurer, Philip L. Becker

Executive Advisory Board

Jim Harrer, President,
Mustang Software, Inc.

Dave Hughes Sr., President,
Old Colorado City
Communications

Stan Hirschman
VP Operations, Software Etc.

Fred Clark, President,
Clark Development Co., Inc.

John C. Dvorak,
Columnist, PC Magazine

Steven Laliberte
Director, BIX Online Services

Tim Stryker, President,
Galacticomm, Inc.

Jim C. Warren
Microtimes/Autodesk, Inc.

Lance Rose, Atty.
Author, SYSLAW

3 Days of Intensive Educational Sessions

Running a BBS for Profit

Connecting Your BBS to the Global Internet

BBS Networking with FidoNet, RIME, ILINK

Offline Mail Readers and Caller Utilities

Legal Aspects of Running an Online Service

Shareware Library Success Roundtable

Social/Chat BBS Success Roundtable

Mail Service BBS Roundtable

Special Topic BBS Roundtable

Product Support BBSs

Company/Corporate BBSs

Third Party Developer Conferences

Presentations on TBBS, PCBoard, Wildcat!

Major BBS, Searchlight, and more.

Trade Show Exhibit Area

Over one hundred BBS and communications vendors present their latest product introductions for your inspection. Hundreds of special show discount offers on modems, CD-ROMs, and software make this the best "shopping" event in the industry.

Registration

\$175 until May 1st, 1993

\$250 from May 1st - August 1st

\$325 after August 1st.

ONE BBSCON '93 is limited to 2,000 attendees so register early and often.

On-site registration opens Wednesday afternoon, August 25th, 1993.

Closing session Sunday morning, August 29th, 1993.

Vendor exhibit area open Friday, August 27th, and Saturday, August 28th.

For Convention Registration and Hotel Reservations

Contact Peg Coniglio at: ONE Inc.
4255 South Buckley Road, Suite 308
Aurora, Colorado 80013

(303)693-5253 Voice

(303)693-5518 Fax

(303)693-5432 BBS

The Innovation Continues...

VERSION 6.1

of The Major BBS®

Hard at work in sun-swept Florida, our fearless developers have discovered the future of BBSing... EGA/VGA graphics and ANSI *together on the same BBS!* The Major BBS Version 6.1 gives you the power to create a graphical DOS-based BBS that still supports non-graphics users — *everyone* can use your system.

Our new multi-lingual/multi-protocol architecture lets you easily plug in languages, such as Spanish and French, and alternate presentation protocols like RIPscrip and NAPLPS. You can offer as many as 50 different languages for up to 256 simultaneous users on a single machine. Add new languages with just a couple of keystrokes.

Use our RIPscrip add-on option to give your users dazzling online graphics. The Sysop "paint" tool works directly with The Major BBS configuration utility and lets you draw beautiful scenes and mouse-driven menus. A royalty-free, graphics terminal program is included for distribution to your customers.

Version 6.1 also includes "doors" to a second machine, better MS-Windows support, MHS file attachments, an "upload message" feature in E-mail and Forums, improved security, and much more.

That's just the beginning. Our new Fax/Online add-on lets you integrate fax-mail and fax-server technology into your BBS. And our new Major Gateway/Internet add-on directly ties you into the world's largest message network.

As the competition fades into the sunset, we continue our quest to give you the best BBS in the world. See your local software dealer or call us at 1-800-328-1128.

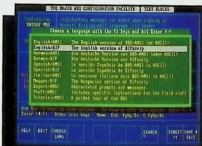


GALACTICOMM

4101 SW 47th Ave. • Suite 101 • Ft. Lauderdale, FL 33314
BBS: (305) 583-7808 • Fax: (305) 583-7846 • Voice: (305) 583-5990



RIPscrip gives your BBS the dazzling look-and-feel of a graphical system.



Add new languages and presentation protocols — or create your own!



Turn your BBS into a fax/data server with the Fax/Online add-on option.